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Maine's forests are vast and beautiful, supporting human and non-human communities alike. Yet, their story is one of corporate colonization and ongoing oppression. This reader is meant to shed light on some of the forces at work in the Maine Woods and the effects they have on the state, and to inspire a desire to fight and protect our forests and their inhabitants from the powers that be. May Maine's wild forests regenerate, and overgrow the repressive industrial forces.

**COMPILED FOR THE 2004  
EARTH FIRST!  
ROUND RIVER RENDEZVOUS  
HELD IN MID-COAST MAINE  
JUNE 28-JULY 5**



## Resources

### Books

"Beyond the Beauty Strip: Saving What's Left of Our Forests" - Mitch Lansky  
*Radical critique of Industrial Forestry in the Maine Woods.*

"The Paper Plantation" - William Osborn  
*Classic study of the Pulp and Paper industry in Maine and its colonial treatment of the Maine Woods.*

"The Interrupted Forest: A History of Maine's Wildlands" - Neil Rolde  
*Extensive history of Maine's Forests from geologic time to present.*

"Low Impact Forestry: Forestry as if the Future Mattered" - Mitch Lansky  
*In depth explanation of current methods of low-impact forestry using Maine as a case study.*

"The Trees in My Forest" - Bernd Heinrich  
*Ecology of Maine's Forests*

### Websites

Forest Ecology Network  
[www.powerlink.net/fen](http://www.powerlink.net/fen)  
*Group is no longer active but their website contains tons of information on Maine Forest Issues*

Northern Appalachian Restoration Project/Northern Forest Forum  
[www.northernappalachianrestoration.org](http://www.northernappalachianrestoration.org)

Maine coalition for tribal sovereignty  
<http://www.penobscotnation.org/coalition.htm>

Maine citizens for fair bear hunting  
[www.fairbearhunting.org](http://www.fairbearhunting.org)

Downeast Salmon Federation  
[www.mainesalmonrivers.org](http://www.mainesalmonrivers.org)

Maine Wolf Coalition  
<http://home.acadia.net/mainewolf/>

For more information on anything found in this reader contact:  
[cub@riseup.net](mailto:cub@riseup.net)





## INDUSTRIAL COLONIZATION OF MAINE'S FORESTS

### A BRIEF HISTORY

Maine's vast Forests have long been exploited and converted to capital, fueling the expansion of empire and corporate greed.

As early as the mid 1600's the Massachusetts Bay Colony began its imperial spread northward, occupying Native lands and displacing or killing off tribes such as the Abenakis, Pigwackets and Norridgewocks until there were only two major tribes remaining in the area which is now known as Maine, the Penobscot and the Passamaquoddy.

Britain relied on this New England Colony to supply ship masts for its powerful navy. One of the clauses of the Massachusetts charter specified that all trees large enough to be masts were property of the King. Surveyors were sent into the dense Maine Woods to mark the trees with an arrow sign, declaring the King's ownership of these forest giants. Eventually, most of Maine's virgin White Pines were hacked and dragged from the forest to build British war machines.

By the late 1700's the commonwealth of Massachusetts was independent of England, and could focus on expanding the new American empire. Through a series of deceptive treaties and land purchases such as the "Old Indian Purchase", the Penobscots and Passamaquoddies were tricked into relinquishing rights to their land, and were essentially forced onto isolated reservations.

In 1820 Maine broke from Massachusetts and became independent, yet both states shared ownership of the public lands in Maine. However, due to the lack of settlement in Maine, the government saw no need for public land and began to auction it off to private interests, business persons and entrepreneurs.

Thus begun the timber industry in Maine. The Maine woods began attracting "timber barons" and speculators from Boston to New Brunswick. There was a frenzy of land sales as individuals and wealthy families purchased entire townships in the Maine Woods.

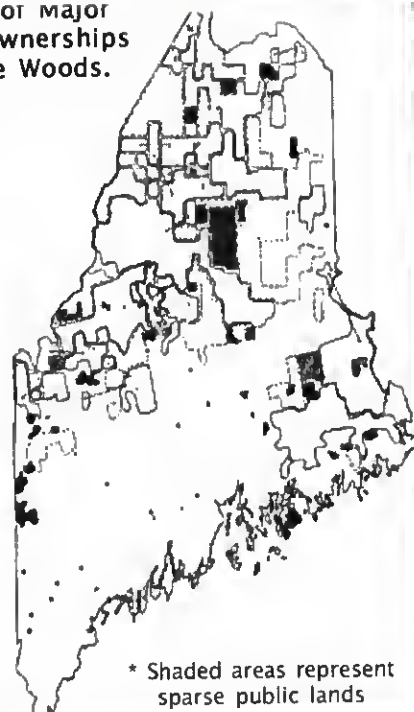
With the development of log "booms" on rivers such

## Who Owns Maine?

With Greater than 90% of its landscape covered in forests, Maine is the most forested state, percentage-wise in the nation. The 10.5 million acres that make up Maine's North Woods is the largest area of woodlands east of the Mississippi River. More than half of the state of Maine has never been settled or permanently developed.

The lack of development and settlement in the Maine Woods would lead one to believe that the area was ripe with protected public land, parks and reserves. Yet, **Maine has the smallest proportion of public land of any similarly forested state.**

Rough map of major industrial ownerships in the Maine Woods.



\* Shaded areas represent sparse public lands

Landowner	Acres
Irving Woodlands	1,570,000
International Paper	1,200,000
Pingree Associates	941,000
State of Maine	919,000
Plum Creek	905,000
Prentiss & Carlisle Inc.	860,000
Bayroot	518,000
Sunrise Tree Farm	445,000
U.S. Government	191,000
Passamaquoddy Tribe	138,000
Penobscot Nation	123,000

\*Irving, International Paper, and Pingree all own more land in Maine than the state itself.

\*Irving owns more than six times the amount of land of held by both of Maine's remaining first nations combined.

Approximately 94% of Maine's lands are under private ownership. There is almost no National Forest land in Maine. The small amount that does exist is an extension of New Hampshire's White Mountain National Forest that spreads into Western Maine.

**Maine has the highest concentration of industrial land ownership of any state in the U.S.** Nearly 10 million acres, or 57% of Maine's forests are owned by industrial and institutional landowners with interests in timber harvesting.

The small amount of public land in Maine has been justified by the fact that industrial owners traditionally allow access to their land for recreation. Yet, the constant swapping of land-ownership among various large industrial owners makes it difficult to trust the future of our forests.

Besides, what kind of life can be supported by industrial forests full of clearcuts, compacted skidder trails, toxic herbicide sprays??

cides. Almost half of the agricultural chemicals used on US crops are applied to cotton. (not to mention soybeans, and tree farms and replants)

Hemp produces more pulp per acre than timber on a sustainable basis, and can be used for every quality of paper. Hemp's low lignin content reduces the need for acids used in pulping, and its creamy color lends itself to environmentally friendly bleaching instead of harsh chlorine compounds. Less bleaching results in less dioxin and fewer chemical byproducts. (and less cancer and less air pollution and less toxic rivers and less bioaccumulated toxins threatening keystone predators)

Hemp fiber paper resists decomposition, and does not yellow with age when an acid-free process is used. Hemp paper more than 1,500 years old has been found. It can also be recycled more times. Hemp fiberboard produced by Washington State University was found to be twice as strong as wood-based fiberboard. Eco-friendly hemp can replace most toxic petrochemical products. Research is being done to use hemp in manufacturing biodegradable plastic products plant-based cellophane, recycled plastic mixed with hemp for injection-molded products, and resins made from the oil to name just a very few examples.

## The Creative Universe:

Sometimes I start to feel like it's all hopeless and doomed. But then I go for a walk in the woods, and I am moved by the clarity of the forest, the tendency of life to persevere. Trees want to grow. And certainly will long after I am rotting back into the soil that created me. I want to believe that We will create sustainable alternatives to forest fibers. I want to believe that We will save the remaining wild places, and their spirit and diversity will propagate outward, spreading beauty and strength. And if it doesn't? Well, don't you love it enough that you would fight for it anyway?

**FREE THE LAND!**



Hemp is among the oldest industries on the planet, going back more than 10,000 years to the beginnings of pottery. The (insert some pretentious authoritative book here) states that the oldest relic of human industry is a bit of hemp fabric dating back to approximately 8,000 BC. Presidents Washington and Jefferson both grew hemp. (*and held slaves and created the capitalist republic that we now live in*) Americans were legally bound to grow hemp during the Colonial Era and Early Republic. The federal government subsidized hemp during the Second World War and US farmers grew about a million acres of hemp as part of that program. (*just a brilliant illustration of our governments continued hypocrisy*) Hemp Seed is far more nutritious (*and sustainable*) than even soybeans, contains more essential fatty acids than any other source, is second only to soybeans in complete protein (but is more digestible by humans), is high in B-vitamins, and is 35% dietary fiber. The bark of the hemp stalk contains bast fibers which are among the Earth's longest natural soft fibers and are also rich in cellulose; the cellulose and hemi-cellulose in its inner woody core are called hurds. Hemp fiber is longer, stronger, more absorbent and more insulative than cotton fiber. (*Hemp cultivation also stacks functions. . its possible to get seeds, long fiber for cloth and short fiber for paper from the same crop. And still have left over biomass for burning.*)

As a biomass fuel producer hemp requires the least specialized growing and processing procedures of all hemp products. The hydrocarbons in hemp can be processed into a wide range of biomass energy sources, from fuel pellets to liquid fuels and gas. Development of biofuels could significantly reduce our consumption of fossil fuels and nuclear power. (*and could increase our dependence on fossil fuel dependant genetically engineered, pesticide and fertilizer dependant mono-cropped industrial agriculture.*)

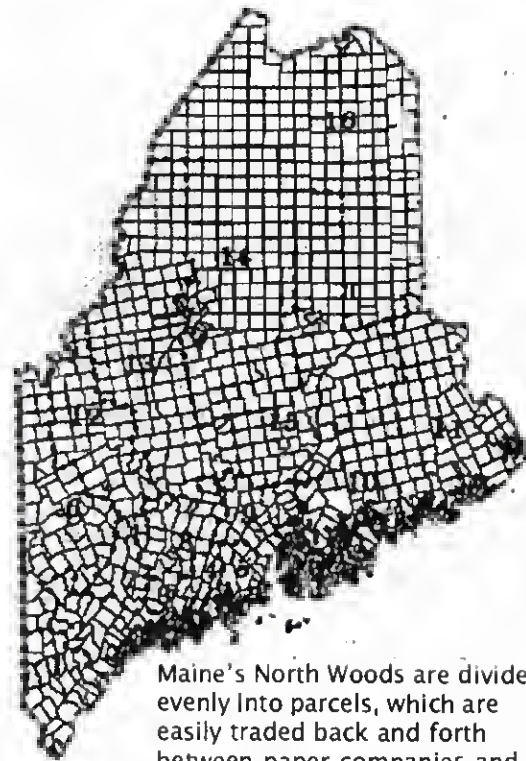
Hemp grows well without herbicides, fungicides, or pesti

## Maine's Unorganized Territories

Roughly 2/3 of Maine is comprised of the Unorganized territories.

These territories have no forms of local government and are administered by the state's Land Use Regulation Commission (LURC).

Many of the unorganized territories have no permanent residents and have names such as "T8 R14" and "Township E". Some territories are referred to as "plantations". The gridlike distribution of these townships seems to facilitate the frequent swapping of land in this area back and forth from one large corporate owner to the next.



Maine's North Woods are divided evenly into parcels, which are easily traded back and forth between paper companies and corporations in the timber industry

### 2 Maines

In Northern and Eastern Maine, income is low and poverty and unemployment rates are high. Meanwhile, York and Cumberland counties in Southern Maine are prosperously growing. The widening economic gap between the North and South is intimately connected to the exploitative forest industry.

Northern Maine is also depopulating as the forest industry is declining. Aroostook, Penobscot, Piscataquis and Washington counties have lost 6% of their combined population in the past decade. Forest dependent towns Millinocket and Allagash have lost almost 1/4 of their populations after the paper industry cut and ran. T

### Corporate landowners are not good neighbors.

In the Maine woods, paper companies and other industrial landowners from out of state have done little to support the local communities where they own land.

Corporations and investors in Maine are often subsidized by the state government through generous tax-breaks. With credit systems such as the Business Equipment Property Tax Reimbursement Program (BETR) and the Tax Increment Financing agreement (TIF), revenues from property taxes are redirected from local municipalities to the corporations themselves. There are no restrictions or requirements such as the creation of jobs or the raising of wages and benefits in order for corporations to be eligible for these tax-breaks.

Reminiscent of military occupations, industrial landowners in towns such as Allagash divide up their landholdings with gates, charging daily fees for passage. This means that local residents have to go through checkpoints and pay to travel throughout their own community



## SOVEREIGNTY

Indigenous people across the globe have been murdered, displaced and unrecognized by colonizers and hypocritical governments. The Native tribes of the land now known as Maine are no exception. British settlers killed off and displaced many of Maine's first nations upon their arrival, and the abuse of native peoples continues to this day.

The major tribes in Maine were once organized under the Wabanaki (roughly translated as "Eastern") confederacy, which was made up of the Abenaki, Mi'kmaq, Maliseet, Penobscot and Passamaquoddy tribes. However many of these people were forced north into Canada by the imperialist Puritan commonwealth of Massachusetts. The Mi'kmaq, Abenaki, and Maliseet tribes are now recognized as sovereign in Canada. While there are small bands of Maliseet and Mi'kmaq across the border in Northern Maine, the Penobscot and Passamaquoddy are the only remaining tribes with a large presence in the state.

In the words of the U.S. Supreme Court: "Indian Nations are distinct political communities, having territorial boundaries, within which their authority is exclusive...". Yet, Maine tribes repeatedly have this sovereignty denied to them.

### Indian Land Claims Controversy

In the 1970s, Native tribes began to enact lawsuits to enforce their rights under federal common-law and the Nonintercourse Act, which states that treaties enacted after 1790 are legally null and void if they were not ratified by Congress. In Maine, tribes argued that their tribal right to possession was still in force because certain treaties were never even brought before Congress.

A lawyer working on behalf of the Penobscot Nation and the Passamaquoddy tribe brought this case to federal court in 1972 and after much deliberation, proved that roughly 2/3 of Maine's land area was unjustly taken from tribes. The Maine congressional delegation made attempts to extinguish all Native claims to the land. However, with the support of President Carter, what was then thought to be a landmark settlement was made.

In 1980, in exchange for the extinguishment of their land claims, a federal appropriation of \$81.5 million was divided evenly between the Penobscot Nation and the Passamaquoddy tribe for the purpose of purchasing land, and establishing a trust.

However, there is a clause in the settlement agreement which states that any federal Indian law passed will not apply to Maine Tribes, unless the federal law expressly directs that it shall apply to those specific Maine Tribes. This loophole allows the state of Maine to govern Maine tribes as municipalities, rather than as sovereign entities.

### Water Quality

The lives of the Wabanakis were intertwined with the river. They

the yield for pine trees, which can take from 7 to 40 years to reach harvestable size. At the end of the growing season, the kenaf plant flowers. After blooming the flower drops off, leaving a seed pod behind. In almost all parts of the U.S. the seeds can never mature. Because of their African origin they require an additional 60-90 days of frost free conditions to reach the point of germination. This means kenaf cannot run wild across the country like a weed. It also presents some interesting challenges for developers to insure a consistent supply of seed for next year's crop

*So kenaf is not indigenous. . . , but it can't invade because it doesn't get mature enough to produce seeds. But if it doesn't mature enough to produce seeds, it obviously isn't sustainable. . .*

The stalk of the kenaf plant consists of two distinct fiber types. The outer fiber is called "bast" and comprises roughly 40% of the stalk's dry weight. The refined bast fibers measure 2.6mm and are similar to the best softwood fibers used to make paper. The whiter, inner fiber is called "core", and comprises 60% of the stalk's dry weight. These refined fibers measure .6mm and are comparable to hardwood tree fibers, which are used in a widening range of paper products.

Upon harvest, the whole kenaf plant is processed in a mechanical fiber separator, similar to a cotton gin. The separation of the two fibers allows for independent processing and provides raw materials for a growing number of products including paper, particle board, animal bedding and bioremediation aids.

*Mechanical separation sounds dangerously industrial and fossil fuel dependant to me. . . though the potential of the plant to meet more than one need sounds great. . . stacking functions*



completely interwoven. (INTERDEPENDENCE)

In addition to smashing capitalism and defending the remaining forests, we must also focus on how to build sustainable solutions. We can find alternative materials to tree fiber, such as kenaf and hemp. However, growing these crops in enough volume to satisfy current demands for forest products would require clearing vast tracts of land for their cultivation. Cutting down the forest to save the forest. Therefore, we need to first drastically reduce our demand for these kinds of products. It is the same paradigm that we are seeing with energy right now. Everyone is jumping up and down about biodiesel and solar panels, but before we can successfully transition to sustainable energy we must cut our energy consumption by two-thirds. The earth only receives one third as much energy from sun as what we use up everyday. In both cases, the runaway consumption fueled by the greed and selfishness of capitalism will prevent us from achieving sustainability. When was the last time you saw folks all excited to give up toilet paper? If the shift doesn't happen voluntarily, then it will happen forcefully as the system breaks under its own weight. It is physically impossible for things to continue the way they are. Industrial collapse is just a matter of time. To that end, we should work on finding ways to meet our fiber needs without industrial processes. Especially if we still want to write zines post-industrial collapse.

### Kenaf and Hemp-Plenty of Potential

Kenaf is a 4,000 year old crop with roots in ancient Africa. A member of the hibiscus family (*Hibiscus cannabinus* L), it is related to cotton and okra, and grows well in many parts of the US. Kenaf grows quickly, rising to heights of 12-14 feet in as little as 4 to 5 months kenaf yields of 6 to 10 tons of dryfiber per acre per year are generally 3 to 5 times greater

built their villages on the banks of rivers and relied upon them for food, transportation and medicine. Today, Maine's great rivers are named after native tribes including the Penobscot, Saco, Androscoggin and Kennebec (although these are really English versions of the original Abenaki names).

Today, the Penobscot river remains the home to the Penobscot Nation and the Passamaquoddy Tribe and has been the subject of a major clash between the natives and the Maine State government. The water in the Penobscot has been polluted for years by Dioxin discharge from Paper Mills along the river, such as the Lincoln Pulp and Paper Company. It is no longer safe to eat fish from the river, thus preventing the tribes from subsisting in their traditional way.

The paper companies want their water discharges to be governed by the State Department of Environmental Protection. However, the tribes assert that state officials are too beholden to corporate interests and want the Federal Environmental Protection Agency to regulate the rivers running through their lands. Three paper companies asked the tribes to turn over documents that relate to their water quality monitoring. The tribes refused, saying that as sovereign entities they are not subject to the access law. Water quality is an internal tribal matter.

As political sovereigns, the Tribes do not recognize the authority of the state over any matters that affect their health and welfare. After years of dispute, the EPA announced last year that the federal government would take control over the tribes water treatment facilities, but that the state would retain control over the rivers. The Penobscot and Passamaquoddy will not settle for this compromise and have appealed the decision in federal court.

#### Casino Development

A referendum on behalf of Native tribes to build a Casino in Sanford was crushed in November of 2003. Maine continued its tradition of suppressing tribal sovereignty in a decision that appeared more anti-native than anti-gambling because during the same voting period, a referendum passed allowing the installation of slot machines at a harness racing facility.

While the construction of Casinos would surely have a negative impact on the fragile ecosystems and wildlife in the proposed site, continuing the sprawl and development that has been consuming many of Maine's wild places, the issue is not one of conservation. The issue is the sovereign rights of Maine's first nations, who should not be prevented from independent economic development on their lands.

#### Liquefied Natural Gas

LNG is a concentrated, highly flammable fuel. A site hosting an LNG receiving port would face many environmental threats, including disruption of local fishing operations, and possible catastrophic accidents including the spread of hazardous vapors or thermal damage. LNG ports have already been rejected by locals in Herpewell, Sears Island, and the Portland Offshore area. The newest target for LNG developers is Pleasant Point, on Passamaquoddy Tribal land. While an LNG port may provide much needed jobs and economic development for the tribe, the Passamaquoddy are clearly being targeted for this destructive endeavor now that wealthier communities, with the ability to do so have said NO to LNG.

# The Paper Plantation

Maine is Poor. Maine is corporate country- a land of giant pulp and paper companies imposing a one-crop economy with one-crop politics which exploits the water, air, soil, and people of a beautiful state.

The goal of the paper industry is the maximum profitable extraction of pulpwood. And it dominates the state as it pursues this goal with a tunnel vision unique even for large absentee corporations. Over the years this single purpose drive has developed a political economy that serves these corporate moguls rather than restrains them. At almost every interface, the paper mills coordinated their power to defeat legitimate countervailing private and public interests.

-Ralph Nader, from the introduction to William Osborn's 1974 book "The Paper Plantation"

The North Maine Woods have been controlled as a colony, for the profitable enterprises of outside powers. The same pattern of human and resource exploitation that increasingly threatens the global south, has already occurred in Maine. As the World Trade Organization and international trade agreements such as NAFTA and the proposed FTAA allow corporations to colonize developing countries and extract their resources, Maine's forest dependent communities have suffered from similar exploitation.

Maine's extensive forests fueled a cut and run industry, which left its mark on the environment and communities of the state. Although many of the paper companies that William Osborn wrote about 30 years ago in his classic study of Maine's paper industry have since left the state in search of cheaper labor and resources, their legacy remains.

## Monopoly over Air and Water

The rivers were the first thing that attracted the large paper companies to Maine in the early 20th century due to their usefulness for transportation and power. Instead of taking precautions to minimize the impacts of its water use on the public, the paper companies in Maine have regarded the state's rivers as their own private property.

This early use of dams to generate hydroelectric power ignored the effects of such structures on public fisheries and delicate ecosystems. Log drives down the rivers and the massive storage of felled trees in lakes damaged water quality and prevented public use. While the water problems associated with log drives and dams have essentially been replaced by air pollution from the transportation of logs by trucks, the his-

pendence-and we can fight systems of oppression that we have internalized by creating hierarchies of species.

Right now the system is surviving off of the illusion it has created that "we" need forest products more than we need forests. We consume forests everyday, when we take a shit, when we publish zines, when we flyer the neighborhood for the next radical event in town. This is one of the biggest paradoxes that we face as forest defenders. Can we live a life that doesn't create support for cutting down forests? Can we justify publishing zines such as this one on paper made from a tree that was once home to hundreds of other organisms? If we don't publish this zine and try to raise awareness, are we dooming the forests to incessant demand for their destruction? It is possible to cut down a tree to save the forest?

Or is it the type of demand that is the problem? Is it okay to publish forest zines, but not okay to build multimillion dollar second homes with virgin lumber? Intuitively we can understand that in the US we use more than our share of the world's resources on average, but it's just that: an average. There are certainly people living in this country who use less than their share of resources, but the trouble is they are overwhelmed by the sheer disparity of wealth that allows some people to own four homes while others are homeless. Capitalism has created a phenomenon where when capital can be accumulated, that capital can be translated into intensive demand for resources. In Maine, that is evident right now by the rush for oceanfront property and the escalation of property taxes in coastal communities as more and more expensive homes are built in former fishing villages. The land-based economies that used to thrive in Maine are threatened by unsustainable demand for their products and thus unsustainable harvesting of the oceans and forests. The fisher folk and the forest folk know this. They see the results of it every day. I hear them talk about it all the time. The struggles are



# Babies in the River :

## *Every Tool in the Toolbox*

It's so easy to get bogged down in how bad the situation is for our forests and all life that depends on the existence of intact, diverse, extensive natural ecosystems. There is no doubt that what remains of these ecosystems is threatened by a number of factors. But the question becomes can we trace these threats back to a single source? It's like the old metaphor about throwing babies in the river. One day you go down to the local river and you see a baby coughing and sputtering and drowning as it floats down the river toward you. (for some people it might help to visualize baby moose or bear cubs or mountain lions drowning in the river) Of course you plunge into the river to save the baby. As you pull it out of the river, you turn and look behind you and there is another baby floating down the river. So you go back in and pull that one out too. But then there is another one and another. At what point do you go into town to alert people about the situation and let the babies drown while your gone? At what point do you go upriver to find out who the fuck is throwing the babies in the river in the first place? For me, the value of this metaphor lies in the hard questions it poses to us about the systemic nature of the problems we are working on. Do we defend the forest one tree at a time? Or do we attack the system that is demanding that the trees be seen as profit instead of one interwoven component in the web that keeps us all alive? Or do we run screaming into the cities and towns and halls of power to get more folks involved in helping to pull babies from the river. I think that the answer becomes that we need to take all of the possible avenues available to us. It seems like we need to be doing everything we can to save individual trees, as well as confront and tear down the system that attacks them. We can resist by setting up blockades and sit to defend specific tracts of forest, we can educate youth about the most basic principal of ecology-interde-

torical neglect on behalf of the paper companies for the quality of water is reflective of their current avoidance of regulation.

In Mill towns, what the company wants, the company gets. The prevalence of large paper mills along Maine's rivers has lead to the discharge of toxic effluents and solid wastes. Yet, their political sway has allowed the paper companies to get away with such contamination. In "The Paper Plantation", Osborn documents various cases of paper companies ignoring the cleanup of major pollution incidents, lobbying for lax pollution controls, and capitalizing on loopholes in regulation policies.

The Pulp and Paper making process has also had a drastic effect on the quality of air in the state. Pollutants produced by paper mills taint the atmosphere for miles and can affect an estimated 1/3 of the state's entire population. Particulate matter and sulfur dioxide, which are by-products of combustion, are highly dangerous pollutants, which can have severe health effects. Stinky Mill towns such as Rumford and Madison have become undesirable places to live and have abnormally high rates of cancer.

Corporations such as International Paper have incurred fines from the DEP for as much as \$2.2 million for hazardous material violations. Yet, these costs are absorbed as part of business as usual, and simply allow them to maintain their profitable practices.

### Economic Control

The paper industry has maintained an oligopoly, in which a few sellers are able to set prices, due to their large market shares. Recently, many paper companies have sold off their landholdings in Maine. However, historically Maine's paper companies have practiced vertical integration, meaning that they control all aspects of the forest product manufacturing process. Paper companies owned everything from the paper and saw mills to the forestland to supply the mills and the hydrodams to power them. By discouraging the development of smaller operations and cooperating amongst themselves, the corporations have maintained their status as the primary price setters.

While paper companies most likely own enough land to adequately supply their mills, they have carefully regulated their harvests in order to control the market. With their own vast supply of pulpwood on reserves, the paper companies have a powerful advantage when negotiating prices with independent contractors. The deals that contractors sign with the paper companies to supply them with wood give them little economic power or freedom, and the companies are basically able to set the price as low as they wish.



The Paper companies have historically invested a lot of time and effort into the political processes that determine the fate of their forestlands. The phenomenon of "revolving interlocks", in which corporates and industrial executives move in and out of favorable positions in government is characteristic of U.S. politics. In Maine, paper executives have had positions on various governmental boards such as the Department of Conservation, the Maine Forest Service, the Bureau of Parks and Lands, the Land Use Regulation Commission, and the Department of Environmental Protection. Paper executives have also held seats in mainstream environmental groups such as the Maine Audubon Society, the Natural Resources Council of Maine, and The Nature Conservancy. For example, Robert Milliken Jr. who is the president of Baskahegan Forestry, a major landowner in the state, has also spent time as the chair of the Nature Conservancy. The increasing penetration of these bodies by representatives from the paper industry renders them ineffective in safeguarding our forests.

The Pulp and Paper industry has also converted its financial power into political power. In a relatively poor state like Maine, a few thousand dollars can greatly influence the results of an election or a legislative campaign. For instance, in 1995, the paper industry helped ensure the election of Angus King, a governor with a strong anti-environmental record, with over \$100,000 in donations.

The paper industry has also financially supported various Political Action Committees (PACs) in order to oppose referendums on the state ballot which would enforce regulations and limit their profitability in the forest.

In 2000 the paper industry helped defeat Question 2, a referendum calling for permits for clearcuts and limiting the rests of annual cuts on forestlands. PACs such as "Maine's Forest Heritage Coalition" received almost \$3 million in donations from paper companies such as International Paper, Great Northern Paper, and Georgia Pacific. These companies are not even based in the state of Maine, but their large landholdings are evidence of their interest in the state's politics. By helping to defeat referendums like Question 2 and selecting favorable candidates, these corporations are able to maintain their profitable harvesting practices in the Maine Woods.

# OLD GROWTH IN MAINE

It's hard to imagine that in a state with so much untamed land, that almost all of the forests have been cut at least once in their history. Yet, while most of Maine's lofty trees were plundered by colonists, some late successional forests with old growth characteristics do still exist in Maine. Some of these groves survived because the surrounding forest was logged over half a century ago, when only certain trees had merchantable value. These sites are home to some of Maine's remaining old growth forests whose lives have been spared and are currently protected.

## *Upper St. John River (Aroostook and Somerset Counties)*

Almost 5000 acres of old growth, divided among a number of tracts, on 180,000 acres of land owned by The Nature Conservancy. The Nature Conservancy notes that some large pine or spruce were likely removed by horse but there are no indications of mechanized clearing. Old, dense stands of Black Spruce and White Cedar remain today. The trees in the old growth areas are not large, because growing conditions are poor and because the areas burned frequently until the late 1950s when fire suppression began. The Conservancy protects the old growth in ecological reserve units.

## *Baxter State Park, north central Maine (Piscataquis County)*

About 451 acres of northern hardwood, mixed hardwood conifer, and spruce forests in good condition, constituting the Natural Area or primary reserve, within the 29,537 acre Scientific Forest Management Area. The Natural Area is traversed by the south branch of Boody Brook. Trees south of the brook include Sugar Maple, Red Maple, Yellow Birch, American Beech, Eastern Hemlock, Red Spruce, and an occasional Eastern White Pine. No signs of past logging are found here. North of the brook, the forest is primarily Red Spruce with mixtures of Yellow Birch, Red Maple, White Pine, and Balsam Fir. Here can be seen decaying stumps of White Pine from selective logging prior to 1900. Wind and spruce budworm appear to be the main disturbances.

## *Big Reed Pond Preserve (North of Baxter State Park)*

This Nature Conservancy preserve is the largest area of old growth forest east of the Mississippi and includes old growth White Cedars.

## *The Hermitage (Piscataquis County, near Gulf Heges)*

This is a majestic stand of old growth White Pines that was declared a registered national landmark in 1968. The land is now also owned by the Nature Conservancy.

There are many other small stands of old growth trees in Maine on Private and Public land. We must ensure that these unique fragments of undisturbed forest and the ecological communities that they support are protected.



# Imported Jobs and Exported Logs

## Labor Issues and Job Insecurity in Maine's Forests

### Decline of Maine's Forest Industry.

At One point, the Paper Industry's Mills and Woodlands employed nearly 1/4 of the entire manufacturing work force in Maine. However, the dominant industry has been on the decline in the past few decades.

In 1975 there were about 17,000 workers in paper manufacturing, and in 2003 there were only 10,000. In 1979 there were 5,500 Maine loggers and in 2003 there were just 2,500.

With economic globalization on the rise, corporations are packing up and moving south. Mills in Maine are shutting down and moving abroad as migrant workers who will work for less are providing competition for what few jobs still exist.

### Canadian Bonded Woodsman Program.

Through this program, administered by the U.S. Department of Labor, paper companies and other industrial foresters can petition to import Canadian workers to cut their lands. In 2003 over 650 Canadians officially worked in the Maine Woods. Canadians are "bonded", meaning they are imparted to work a specific job for a specific period of time. Canadian loggers only spend a brief time in the Maine Woods, and eventually export most of their earnings back to Canada. The local Maine economy receives no benefits. Furthermore, by hiring Canadians who work deep in the woods in temporary logging camps, the forest industry is able to avoid the development of permanent towns and communities that would provide them with domestic labor.

### Migrant Forestry Workers.

Some large industrial land owners such as living also subcontract labor to migrant forestry workers from Central America and Mexico. These workers often do thinning and tree planting work and there were as many as 1200 migrant workers in 2003. Similar to the Canadian bonded laborers, these workers are contracted to do specific forestry work only. These migrant laborers are paid extremely low rates, and are forced to supply their own expensive equipment. Moreover, they usually have to travel up to 3 hours to work sites without being reimbursed for travel time. In 2002 the deadliest car accident in Maine's history occurred when a van carrying forestry workers from Honduras and Guatemala swerved off a bridge in the Allagash Wilderness Waterway, killing 14 men.

### Exported Logs.

In addition to importing jobs, the Maine forest industry exports a significant amount of its raw logs. Processing of logs in pulp and paper mills encourages local economic development and provides jobs beyond the simple extraction of timber from the forest. The export of Maine's logs means that they are processed somewhere else, eliminating the need for more local mills and domestic labor.

Maine's log exports are mostly sent to Canada and in recent years have amounted to as much as 20% of the total harvest. Maine is exporting high value sawlogs, rather than using this resource to stimulate the region's depressed economy.

## Bosque

Busqué para enterrar de nuevo  
la raíz del árbol difunto:  
me parecía que en el aire  
aquella cabellera dura  
era el dolor del pasajero.  
y cuando la metí en la tierra  
se estremeció como una mano  
y otra vez tal vez, esta vez,  
volvió a vivir con las raíces.

Yo soy de ese pueblo perdido  
bajo la campana del mundo  
no necesito de los ojos,  
la sed determina mi patria  
y el agua ciega que me nutre.

Entonces del bosque raído  
extraje el bien desenterrado  
por la tempestad o la edad:  
miré hacia arriba y hacia adentro  
como si todo me acechara:  
no podía sentirme solo,  
el bosque contaba conmigo  
para sus trabajos profundos

Y cuando cavé, me miraban  
los cotiledones hojosos,  
los epipétalos hipóginos,  
las drupas de íntimo contacto,  
las emigrantes azorellas,  
los nothofagos inclementes  
Examinaban la quietud

de mis manos ferruginosas  
que cavaban de nuevo un hoyo  
para raíces resurrectas.

El amancaes y el altramuz  
se empinaban sobre la greda  
hasta las hojas y los ojos  
del raulí que me examinaba,  
del maitén puro y tembloroso  
con sus guimaldas de agua verde:  
y yo sosteniendo en la selva  
aquel silencio irresponsable  
como un mayordomo vacío  
sin herramientas ni lenguaje.

Nadie sabe mi profesión  
desempeñada en las raíces,  
entre las cosas que crujen  
y las que silban de repente,  
cuando las heliantas homógamas  
construyentes cubos genéricos  
toda la selva vaginal  
es una bodega olorosa,  
y voy y vengo salpicando  
las constelaciones del polen  
en el silencio poderoso.

PABLO NERUDA



**David Strikes Against Goliath:  
Loggers & Truckers Stand Up To Irving**  
(reprinted from the Maine Independent Media Center)

It is becoming more and more difficult to make a living as a logger or trucker in Maine. Maine's largest landowner, Canadian-based Irving Woodlands has been a major cause of that difficulty over the past decades as it continues to find new ways to make a profit. Maine forestry policy expert Mitch Lansky explained in a May 2000 Dept. of Labor hearing "While profitability of landowners went up 169% since the 1970s, and productivity per worker went up 74% or more, real wages for loggers went down 32%." Loss of income and control over their livelihoods most recently led loggers and truckers in Northern Maine to form the International Logging Association (I.L.A.). This group has been fighting for a collective bargaining bill to be passed in the Maine legislature and for a fair contract from Irving.

The collective bargaining bill, LD 1318, would allow loggers and truckers hauling wood to organize and collectively bargain with forest landowners who own over 100,000 acres. Currently, the workers in the forest, while legally "independent contractors," are, in reality, employees of landowners, since only a few major companies own both the land and the mills where the wood is processed. This bill spurred James Irving, president of JD Irving, to travel to Augusta to meet with the governor and legislators to discuss the bill. In a Bangor Daily article, Maine Irving operations manager Chuck Gazdic is quoted as saying, "We take the threat of this bill very seriously. It is a substantial threat to our success." In that same article, bill sponsor Rep. Troy Jackson, a logger from Allagash commented, "More than 50 loggers from northern Maine came and spoke at the hearing. ... Anyone who believes the little guy has a chance in Augusta should have been here the last two weeks. ... I haven't seen such a big effort to kill a bill since I have been here. ... I wonder now who lobbies for the little man." The bill was tabled in the Legislature, but sponsors have since made some changes that would exempt smaller landowners, and are hoping that Baldacci will seriously consider the bill. Irving's contracts contain stipulations that are surprisingly blatant in the master/servant relationship they create, very similar to the con-

tracts between the mining companies and workers in Appalachia. One is the agreement that if the contractor ends work before the contract agrees, for any reason (for example, if the contractor can't afford to pay the massive loans on their equipment, and can no longer afford to operate), Irving can take control of contractor's equipment, using it to finish the harvest. If the amount harvested is less than expected the contractor then OWES Irving the lost expected profits. This is what contractors face for breaking a contract - Irving, on the other hand reserves the right to break the contract at any time and for any reasons (Market Conditions is one valid reason Irving specifies) and the contractor must clear all the equipment off Irving's land and accept the loss - Irving doesn't owe the contractor anything. Irving continues to push loggers and truckers into situations where they must take out loans to purchase hundreds of thousands of dollars worth of new equipment in order to keep up with Irving's harvesting practices and attempt to maintain a livable income. Once truckers began buying lighter trucks so they could haul heavier loads of woods over the roads, the rates they were receiving from Irving went down. Now Irving is pushing truckers to buy new off-road trucks, but it doesn't maintain the roads well on its land which those trucks are intended to drive on.

Other new logging equipment has computers installed on board which will set off alarms if the joysticks on the equipment aren't used (for any reason - such as using the bathroom) for a period of more than 30 seconds - the operator has to tell the computer why it's not being operated at that time to shut off this alarms. Much of this equipment is being pushed to increase worker "efficiency" - basically more output for less cost to Irving.

Irving's is planning to implement a new "Efficiency Program" which Allagash logger and state Rep Troy Jackson describes as "another scam of theirs to get you to work harder, longer, and more productively so they can lower your rate again." The details to Jackson, Irving has been working to convince fellow loggers to sign onto the plan, with the explanation that if a logger normally made \$10,000, and under the plan made \$14,000, Irving would get to keep half of the new income, so Irving would get \$2,000 for the logger's efforts in following the plan.

**Paper Birch (Canoe Birch) (*Betula papyrifera*)**

**What it looks like:** The brilliant white, papery bark of mature trees, which peels off in thin strips, makes this tall slender birch unmistakable. The oval-shaped, small leaves have finely serrated edges. **Flower/Fruit:** In early spring long, drooping catkins, which have been formed the previous year, appear with the new leaves and disintegrate when mature, scattering their numerous seeds.

**Size:** 50-70 ft. tall; leaves 2 - 3 in. long.

**Habitat:** Moist, sandy soils; often colonizes burned-over areas; common throughout Maine, but relatively short-lived.

The birch-bark canoes that used to be made by Native Americans are legendary; birch bark is also great for starting fires. The peeling bark of the Paper Birch is an adaptation developed to help the tree survive the winter months. When the bark peels it keeps the tree trunk white. White bark will reflect the sunlight instead of absorb it, thus keeping the inside of the trunk at a more consistent temperature.

**White Ash (*Fraxinus americana*)**

**What it looks like:** Leaves are 8 - 12 in. long, **useful**

on long slender stems; each leaf consists of 7 (usually) small leaflets, opposite each other, with one at the end. The bark is gray-white and has deep furrows.

**Flower/Fruit:** Lavender flowers appear before the leaves and are followed by narrow, winged fruits in clusters, with the seed at the end.

**Size:** 70-80 ft. tall.

**Habitat:** Uplands in rich soils. White Ash indicates fairly rich soil conditions. Its hard wood has long been used to make professional quality baseball bats.

*Rare in Maine 'cause it needs a mature forest*





## Red Maple (*Acer rubrum*)

**What It Looks Like:** The Red Maple is most easily identified in the fall, when its leaves turn a brilliant scarlet. Leaves have the characteristic maple-leaf shape; they grow in pairs and have opposite branching. Leaves have 3 - 5 lobes and are coarsely toothed along the edges.

**Flower/Fruit:** Clusters of tiny red flowers appear before the leaves; two joined seeds, often red, in a V-shape like little wings, follow the flowers in spring.

**Size:** 50-70 ft. tall; leaves 2 - 6 in. wide.

**Habitat:** Moist or swampy soils.

Red Maples, one of the most common and adaptable trees in New England, have something red on them during each season. Following the red flowers and seeds in spring are red leaf stalks in summer, red leaves in the fall, and red buds in winter.

## Northern Red Oak (*Quercus rubra*)

**What It Looks Like:** Though the leaves of all oaks are basically similar, Red Oaks are distinguished from White Oaks

by the fact that the lobes of their leaves are spiny and pointed. Northern Red Oak leaves turn red in the fall; in spring, the buds are dark red and shiny.

**Flower/Fruit:** The fruit of all oaks is called an acorn, the Northern Red Oak acorn is round and about 1 in. high. **Size:** 60-80 ft. tall; leaves 5 - 8 in. long.

**Habitat:** Very common, especially in rocky forest soils. Along with White Pines, Red Oaks provide a major source of food for squirrels, chipmunks, and mice. These animals collect oak acorns and store them to eat in the winter.

## White Oak (*Quercus alba*)

**What It Looks Like:** The tips of the lobes of all White Oak leaves are rounded, not pointed like Red Oak leaves. White Oak leaves turn rusty brown in the fall and often stay on the tree throughout the winter.

**Flower/Fruit:** Along with the new leaves in the spring, the White Oak produces drooping, yellowish catkins. The acorn is oval-shaped, 1/2 - 3/4 in. long, set in a bowl-like cup covered with warty scales.

**Size:** 80-100 ft. tall; leaves 5 - 9 in. long.

**Habitat:** Although native to this area, the White Oak is much less common in forests than the Northern Red Oak.

Native Americans used White Oak acorns as a major source of food. They ground up the acorns into a sort of flour, and then used the flour for cooking. You can compare the taste of White Oak acorns (if you can find them) to Red

acorns in following the plan. When the International Logging Association first began meeting, they were offered a 7% average rate raise from Irving. Some members of the ILA were wary of this deal, as it allowed Irving to offer a 14% raise to one contractor and a 0% raise to another, and the average would be 7%. The 7% offer was revoked, in any case, after Irving heard word that a strike was in the works, and instead offered to increase payment to cutters by 10% while offering no increase at all to truckers. The ILA rejected this offer and on January 5th and brought about 50 trucks to Portage, announcing that they would be striking, and calling for Baldacci to support the Collective Bargaining Bill and for Irving to increase rates.

The first week most of the strikers held fast, and only by the third week did a noticeable portion return to work, with about half of the loggers going back to work, though almost all of the truckers remained striking. Throughout the strike, Irving was calling strikers at their homes at night, visiting some of them in person, offering individual deals to loggers of a 2% rate increase over the 10% if they would sign onto the efficiency program.

Irving also wasn't making it easy for strikers to work for other landowners. According to St. Francis resident Angie Hafford, when another landowner offered the strikers work on their land, Irving was "enraged" that workers were taking up work with other companies, and denied access to any of the roads it owned to get to the other land, and threatened to press charges on any logging company or logging truck that was found using those roads. Irving representative Gadzic explained in a Bangor Daily article that Irving couldn't agree to many contract changes because, come spring, Irving would be making a move to transition its log transport from truck to more railway transport. Jackson argues that plan isn't a real possibility, though, because the railways are unlikely to be able to handle more logs than they already transport, and the threat rail transport is just another way to scare people into working for lower rates.

Unlike past times, Irving didn't bring in Canadian workers to replace the strikers. Jackson thinks this is likely due to the fact

that Canadian loggers and truckers aren't making enough money and are facing similar and worse deals with Irving. ILA members were keeping in touch with a New Brunswick logging association throughout their organizing. The New Brunswick loggers had gone on strike a about 3 years ago for 6 weeks, and though they didn't get all their demands met, according to Jackson, they "held their own." On the 3rd week of the Maine strike, truckers in New Brunswick went on strike, and the following morning Irving met their demands. Jackson thinks this may well have been in part to keep the fact that truckers on both sides of the border were striking against Irving at the same time, making the issue a larger cross-border problem - and breaking down the idea that the American and Canadian loggers have no common interests or solidarity. Three weeks after the strike began, strikers voted to return to work, with the stipulations that Baldacci support the collective bargaining bill and that Irving take back all contractors who had been part of the strike. Strikers lack the power to enforce these stipulations, though, so they are really include to have the statements on the record. It's far from clear whether Baldacci will support the bill. And although Gadzic stated in a Bangor Daily article "The only folks that we're not anticipating doing business with are the ones who have moved on to other things," Jackson said otherwise, explaining that Irving was pulling the contracts of three loggers involved with the strike, saying they weren't needed and telling one of the loggers that he "was too vocal."

Although the strike has ended, the ILA is still together and members hope it will remain active. Jackson explains that it can continue to help members and be a force to show solidarity between loggers and truckers. Irving will doubtless continue to pressure the governor to reject the collective bargaining bill and make as much profit possible off the workers and communities that generate it. But as Jackson observes about Irving, "When you're that powerful you can do a lot of things that I certainly can't predict - but I guess that's part of the battle - you gotta keep watching, gotta react, try and counter their shit." The strike is just part of a continuing struggle by loggers and truckers to earn enough to make a living and help keep their communities alive.



# INDUSTRIAL FORESTRY



The Maine Woods that Thoreau wrote about was a vast and beautiful wilderness, which was basically undisturbed by human activity. However, the continuous, uninterrupted forest that Thoreau praised has been ravaged by the destructive industrial logging industry, transforming the Northern Forest into a private realm for the extraction of timber.

Scientific management of forests for short term, maximum profits is based solely on human interests, and disregards the ecological balance, critical habitats, and biodiversity that a wild forest sustains. Although some token efforts may be made at sustainable forestry, any forest management for the purpose of extracting merchantable timber inevitably creates major disturbances in the state of the forest.

The construction of logging roads compacts the soil and creates fragmentation in the forest, possibly splitting vulnerable ecosystems in half.

Clearcutting is the most ecologically damaging and correspondingly the most cost effective method of converting trees to logs. Technically defined, clearcutting means cutting every tree in an area and transporting those considered as financially valuable to a mill. Clearcuts are usually "cleaned up" and cleared of all dead or dying trees, which could otherwise provide habitat for countless species, and add vital nutrients and organic matter to the soil as they decompose.

Extensive herbicide spraying on industrial forestlands often follows clearcuts. These sprays are designed to kill a variety of "undesirable" plants, reducing the diversity of the forest and limiting the availability of food and shelter for many wildlife species. Herbicide spraying facilitates the quick conversion of forests into orderly plantations of trees, which are simply profit farms for capitalist production and lack the ecological

## Balsam Fir (*Abies balsamea*)

What it Looks Like: Balsam Fir needles - **Useful**



are slightly longer than those of hemlocks, and are also flat with two white stripes on the underside. They are unstalked and have circular suction cup-like bases. The twigs are smooth and is generally smooth, while hemlock bark is rough and flaky. The purple-green cones grow upright along the branches.

**Size:** 2 - 4 in. long.  
**Cone:** 2 - 4 in. long.  
**Habitat:** From swamps to well-drained or moist soils near lakes and streams.

Balsam Fir needles have a strong smell when crushed. A popular Maine

sack. Native Americans would ward off mosquitoes by rubbing Balsam Fir branches on their skin. They say that the strong smell makes you smell more like a tree and less like a human, so that the mosquitoes are less attracted to you.



Some people actually live in Maine.

**Tamarack (Eastern Larch) (*Larix laricina*)**  
**What to Look For:** Needles are very soft, light blue-green in color, giving the tree a delicate, feathery look. The needles grow in dense clumps off tiny shoots growing from the branches; in the fall they turn a brilliant yellow.

**Size:** 40 - 80 ft. tall; needles 3/4 - 1-1/2 in. long.  
**Habitat:** Swamps, bogs, and upland forests.

The Tamarack (often called Larch) is the only deciduous conifer.

Tamaracks lose all their leaves (needles) in the fall just as oaks, maples, and other hardwoods do.



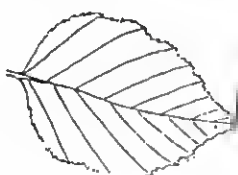
## Yellow Birch (*Betula alleghaniensis*)

**What it Looks Like:** Resembles the Paper Birch in size and form, but the bark is yellowish to bronze and peels into narrow, curved strips, and the leaves are longer and narrower.

**Flower/Fruit:** The catkins are oval-shaped, short, and stand up straight on the branches.

**Size:** Up to 80 ft. tall; leaves 3 - 4-1/2 in. long.

**Habitat:** Moist soil; also in higher elevations and burned-over areas. Yellow Birch has wintergreen oil in its sap, which was once used to make birch beer, a soft drink that tastes rather like root beer. If you scratch off a little bit of the bark of a fresh twig, you can smell the wintergreen oil.



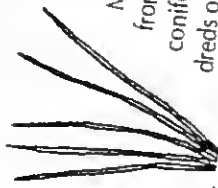
good for CHEVIN'S ON.



## White Pine (*Pinus strobus*)

**What It Looks Like:** The White Pine has long needles in bundles of five. The branches are in whorls around the trunk - one whorl for each year the tree has been alive.

**Cone:** 4 - 8 in. long (usually about 5 in.)



**Size:** 75 - 100 ft. tall; needles 3 - 5 in. long.

**Habitat:** Grows almost everywhere, from wet bogs to dry ridges.

Maine gets its nickname, the Pine Tree State, from the magnificent White Pine. The largest conifer in the Northeast, the White Pine can live for hundreds of years and grow as tall as 300 feet.

## Red Spruce (*Picea rubens*)

**What It Looks Like:** Twigs are completely covered by short, pointed needles. Needles are unstalked; when one is gently pulled off the twig it will leave a small circular mark where it had been attached.

**Cone:** 1-2 inches long, egg-shaped, with thin, woody scales.

**Size:** 60-75 ft. high; needles 1/2 - 3/4 in. long.

**Habitat:** Nutrient-rich woods and edges of streams and bogs; common along Maine's coast.

Spruce cones are a favorite winter food for birds such as goldfinches and crossbills.



## Eastern Hemlock (*Tsuga canadensis*)

**What It Looks Like:** Needles are flat, less than an inch long, with two white stripes on the underside. Very small, oval-shaped cones dangle from the tips of branches. The needles are on tiny pegs and the twigs are slightly rough.

**Cone:** 1/2 - 3/4 in. long, attached by a short stalk.

**Size:** 60 - 75 ft. tall; needles 1/3 - 2/3 in. long.

**Habitat:** Cool, moist locations.

Hemlocks are the most shade tolerant tree in

New England - they can grow in dense

shade for many years before reaching the

canopy. Hemlock needles contain

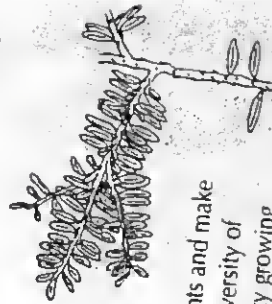
chemicals that actually poison other plants and make

it hard for them to grow. Compare the diversity of

plants growing underneath hemlocks to the diversity of

underneath maples or pines. Despite the toxins, hemlock needles are edible

to humans and contain a high amount of Vitamin C.



Pine and Hemlock needles can be used to make Tree Tea -- a house favorite --

characteristics necessary to support biodiversity.

Overcutting of industrial forests is prevalent throughout Maine as corporations and other large landowners attempt to maximize profits from their land. In Maine, it has been argued that the rate of cutting has grown to exceed the rate of regrowth by the ratio of 2:1. A strictly profit motivated practice known as "liquidation harvesting" has been prevalent throughout Maine in recent years. This involves the purchase of timberland, followed soon thereafter by the removal of most or all commercial value in standing trees, and subsequent attempted resale of harvested land. This practice is conducted mainly by independent contractors who cut their woodlots in order to supply corporate paper mills. Often this type of harvesting is necessary in order for contractors to meet their agreements with paper companies.

## Forest Certification

One technique, which many large industrial owners use to improve their track records and to escape the reputation of environmentally destructive logging practices is to undergo the process of forest certification.

Currently there are two major auditing programs in use in the Maine Woods: the Forest Stewardship Council (FSC) and the Sustainable Forest Initiative (SFI). Of the two programs, the FSC is more effective, requiring third party verification and imposing stricter standards for ecosystem and resource sustainability. However, the standards of both the FSC and SFI have come under significant criticism. The standards of both programs are far too broad and open-ended to be meaningful. For instance, the SFI promotes the maintenance of older forests and forest reserves, as well as limiting the use of chemical and pesticides. However the SFI does not set any specific requirements or benchmarks to enforce these ideals. Essentially, it looks good on paper, but it is not played out in the forest.

According to Mitch Lenksy, a Maine Forest Policy Analyst, "there is evidence of a generally lax approach on the part of most FSC accredited certifiers to ensuring that logging operations comply with the FSC's principles and criteria". Basically, if a large landowner pays a third party to certify their lands, they are most likely to pass the test. The SFI is run by the American Forest & Paper Association which is a coalition of large companies who profit from producing as much timber, paper products and hardwood as possible. It is no wonder the standards are so lax.

This practice is simply a form of greenwash. As retailers and consumers attempt to be more environmentally friendly, there has been a huge demand for certified wood products on the market. Just as egribusiness is attempting to take over the organic food industry, large landowners in Maine are attempting to fool the public into thinking that their methods of forestry are sustainable in order to increase their profits.

Some of Maine's most destructive industrial landowners have had their forestlands certified by the FSC and the SFI including Irving Woodlands and Plum Creek Timber.

Just another corporate Trick!



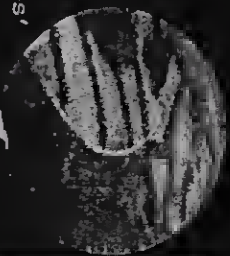


Canadian Based J.D. Irving, the same conglomerate that is rapidly building an empire across the northeast, with gas stations popping up all over the place, is wreaking havoc on over 1,550,000 acres of land, enjoying its status as the state's largest landowner. Irving's rate of cutting exceeds the rate of growth on its woodlands in Maine, threatening the future productivity of our forests. Moreover, Irving is creating artificial spruce plantations consisting solely of White, Black and Norway Spruce (which is an exotic native to Europe). Basically, Irving is replacing the natural forests with profitable crops. In order to maintain these unnatural plantations, Irving has become dependent on the use of herbicides, and is now one of the largest sprayers in Maine. The prevalence of herbicides not only threatens Maine's unique biodiversity, but the health of its human populations as well. Additionally, Irving is considered one of the worst landowners to work for in Maine. Irving underpays the independent contractors who they hire to cut their lands while giving them a "take it or leave it" contract, which encourages overcutting and illegal cutting in order to meet their agreements.



## Plum Creek

The Seattle Based timber company Plum Creek, is currently the fourth largest industrial landowner in the state, with over 905,000 acres of timberlands. Plum Creek is notorious for sucking as much profits from its landholdings as possible through the practice of double liquidation forestry. In other words Plum Creek highgrades the forest of its valuable timber and then subdivides the land for real estate development. This practice not only destroys the ecology of the forest through rampant clearcutting, but also precludes its future use as a working woodland or its regeneration into a wild forest, by converting the area to private summer homes and vacation camps.



H.C. Haynes Inc. is one of Maine's most active logging contractors. As the paper companies began to sell of their lands in recent years, Herbert Haynes, the owner of HC Haynes began buying up tens of thousands of acres of timberland, mostly in central and eastern Maine. Haynes' strategy is to purchase forestland, strip it of as much timber that the law will allow and then sell it quickly for a profit to smaller contractors or subdivide it for house lots. Haynes has developed a public reputation as Maine's most notorious forest liquidator. Most recently, Haynes has purchased 12,500 acres of forest west of Baxter State Park, near Katahdin Lake. This land is home to one of Maine's last roadless areas and contains some of Maine's only remaining old growth hardwood forests. The high price he paid for this land means that he must generate large returns in order to make it profitable. Haynes is allegedly in the process of logging this land. Hmmm...

## Chokecherry (*Prunus virginiana*)

**What it Looks Like:** Usually shrubby but sometimes a tree with simple leaves that have finely serrated edges; when the bark of young twigs is scraped, it releases a strong scent. The edible red berries dangle in long clusters like grapes.

**Flower/Fruit:** Small white flowers line the ends of stems in spring; shiny berries are translucent and bright red. **Size:** 15-25 ft. high; leaves 2-4 in. long.

**Habitat:** Forests, along rivers. The Chokecherry has a huge pit, hence the name "chokecherry". Be careful if you decide to try a berry.



## Beaked Hazelnut (*Corylus cornuta*)

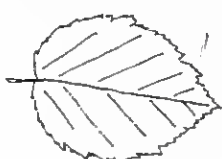
**What it Looks Like:** A small shrub growing to 10 feet high. The leaves are very similar to birch leaves, but its typical growth pattern is different: instead of solitary stems, hazelnuts have numerous stems rising from below ground which develop into a low, rounded crown. Drooping catkins remain on the shrub throughout the winter.

**Flower/Fruit:** Male flowers are long, drooping catkins; female flowers are tiny and bright red; fruit (nut) is covered with stiff, tiny hairs that can become lodged in skin, and has a "beak" at the tip of its covering.

**Size:** 3-10 ft. tall.

**Habitat:** Old fields, edges of woodland clearings.

Related to the hazelnuts you can buy in the store, wild hazelnuts also have very tasty nuts. Unfortunately, the hazelnut bushes in this area rarely produce any fruit.



## Witch-hazel (*Hamamelis virginiana*)

**What it Looks Like:** Usually a shrub, but sometimes tree-like to 15 feet; the fall-blooming Witch-hazel has leaves that are oval, wavy-toothed, and very one-sided (asymmetrical) at the base. The yellow flowers cover the plant after the leaves are shed in the fall and persist into early winter.

**Flower/Fruit:** Light-yellow blooms with long, narrow, loose petals, spidery-looking; brown seedpods hold two seeds each.

**Size:** 5-15 ft. tall; leaves 4-6 in. long.

**Habitat:** Bottomlands, forests, stream banks.

Extracts from the leaves and wood of Witch-hazel are used to make cosmetics and also used as a medicine to reduce swelling and to reduce the production of secretions such as mucus (snoot). Witch-hazel has a unique method of spreading its seeds—its seedpods burst open explosively, throwing the seeds many feet.



Someone who uses plants for medicine a witch!



The name "Shadbush" comes from the fact that the plant blooms at the same time in early spring as fish called American Shad are coming up the rivers to spawn. The fruits of Shadbush are eaten by at least 22 species of birds, and 11 species of mammals either eat the berries or browse the twigs and foliage. The berries are great raw or baked into pies and muffins. They can also be dried like a raisin.

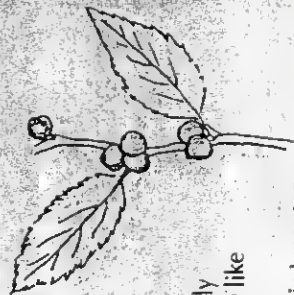
### Winterberry (*Ilex verticillata*)

**What It Looks Like:** A tall, nondescript shrub in the summer, Winterberry becomes spectacular in the fall, when it is covered in clusters of bright red berries, similar to Holly (it is a member of the Holly family). The leaves are smooth, not glossy or spiny like those of Holly, and they are dropped in the fall.

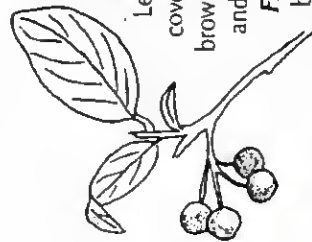
**Flower/Fruit:** Very small white flowers in leaf axils in June; conspicuous red berries.

**Size:** 8 - 12 ft.

**Habitat:** Low-lying wet areas.



Winterberry, very common along the northern coast, can be found inland at the edges of swamps and lakes; it is very tolerant of flooding and wet soil conditions.



**Black Huckleberry (*Gaylussacia baccata*)**

**What It Looks Like:** Very similar to Lowbush Blueberry, but taller; forms a dense shrub layer about 2 ft. high. Leaves are similar to Blueberry, but the underside is densely covered with shiny resin globules; bark is a uniform dark brown and smooth. The edible berries are almost black in color and have 10 large, crunchy seeds inside.

**Flower/Fruit:** Flowers white, drooping, bell-like, in clusters; black, shiny fruit in short, dense clusters.

**Size:** 2 ft. high.

**Habitat:** Forest understory.



Huckleberries are not as productive as blueberries, and their fruits are only occasionally eaten by birds. They make excellent pies and jam, which are very popular in the South. The resin globules on the underside of the leaves contain a yellow dye—if you take one and rub it across a piece of paper or your hand, it will leave a yellow streak.

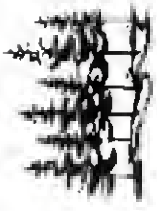
### Highbush Blueberry (*Vaccinium corymbosum*)

**What It Looks Like:** Blueberries are easily recognized because the young twigs are all green; in winter, they are red above and green below. Leaves are simple, unlobed, and have smooth edges.

**Flower/Fruit:** White, bell-like flower blooms in late spring; small, dark blue berry.

**Size:** 5 - 10 ft. tall.

**Habitat:** Swamps, moist woodlands, dry uplands.



## LOW IMPACT FORESTRY



While a majority of Maine's private woodlands are in the hands of industrial and institutional owners like Plum Creek and Irving, a good deal of Maine's forests are managed by smaller, non industrial landowners. According to the Small Woodlot Owner's Association of Maine (SWOAM), nearly 5.5 million acres of Maine's forests, or nearly 30% of the state is in small land ownerships ranging from 10-1,000 acres.

There are a number of small landowners in the state who are dedicated to the practice of Low Impact Forestry. Most of these landowners are actual Mainers who have a past, present and future that are rooted in the land like the trees that they work with. Decisions about forest practices are made in the forest, by the landowners and not in a boardroom across the country in Seattle. While Plum Creek and Irving's idea of sustainability is subscribing to the principles of certification systems, which illegitimately approve their forests, these landowners actually embody the principles of forest sustainability.

Sam Brown is a forester and logger who seems to have a spiritual connection to the forest and who is managing his own plot of approximately 300 acres in Cambridge.

Brown is dedicated to minimizing his impact on the forest, leaving the area where he has worked healthy and intact for future generations. As opposed to the practice of highgrading, which removes all marketable trees in one shot, Sam Brown's forestry not only focuses on removing marketable trees, but on leaving quality residuals. In other words, Sam sacrifices obvious profits for the future health and quality of his forest. Sam Brown understands that he may not even live to see the results of his respectful treatment of his woodlands. But according to Brown, he feels good at the end of a day of work.

Sam Brown's equipment is designed to do as little damage to the forest as possible. Sam uses a small forwarder, which runs on rubber tracks that spread the weight of the vehicle, thus minimizing the impact on the soil. This compares to large skidders and feller bunchers characteristic of larger operations, which often run on wheels, which can compact and damage the soil. Moreover, Sam's small forwarder allows him to minimize the amount of logging roads on his land and to decrease width of his trails through the forest.

When Sam fells a tree, he cuts the limbs off on the spot, leaving them to rot and contribute vital nutrients to the soil. This way he does not have to drag the entire tree out, which would require wider roads and be more damaging to the soil and other plants in the forest. He then attaches a grapple to the base of the tree and uses a radio-controlled winch to drag the tree out of the wooded area, carefully navigating in order to avoid damage to residuals. Sam then loads the logs onto the trailer of his forwarder, and they are carried, rather than dragged out of the forest.

Sam's equipment and careful methods of logging are less productive than other operations, in terms of his actual rate of harvesting. Sam only cuts about a half of a cord a wood per hour. However, as Sam says, for true sustainable forestry, "just like organic food, good things cost more".

The result of Sam Brown's low impact forestry is a forest that actually still looks like a forest, which nonetheless produces some valuable timber. Brown has visited old-growth forests in Maine and tries to manage his forest to have similar characteristics. Moreover, Sam opens his land to the public for recreational purposes and hunters and cross-country skiers who use his trails provide positive feedback on the natural quality of the forest. Sam's relationship with the public on his land bears a stark contrast to the practices of landowners like Irving and Plum Creek. For years the extensive amount of private, industrial land has been justified by the fact that most large landowners allow public access to



their lands. However, as corporations like Plum Creek subdivide their landholdings for real-estate development, traditional public access may be lost. In fact, residents of Allagash already have to pay fees at gates maintained by Irving just to visit parts of their own community.

Just imagine if all of Maine's working forests were managed the way that Sam Brown cares for his small plot of land. The forests could have a chance to regenerate to the likes of the lofty pine forests that once dominated all of Maine. However, as Brown notes, society must realize these values and begin to subsidize his type of low-impact, sustainable forestry. As Brown notes "landowners must not be forced to over cut in order to make a living". True green certification must be available to smaller landowners, so that they can charge more for their sustainably harvested wood products in order to compete in today's market.

Currently, while the questionable forestry practices of Plum Creek and Irving are certified by the FSC, smaller landowners like Sam Brown, who actually practice sustainable, low impact forestry, are unable to afford the certification process. Again, just like the organic food industry, smaller operations, which truly embody the principles of sustainability, are unable to reap the benefits of the market for such premium goods.

If industrial foresters who high-grade and clearcut their lands with no regard for the future are considered "green", while loggers who are actually sacrificing short term profits for the ecological integrity and future productivity of their forests are incapable of becoming certified, the system must be flawed. Those who are forfeiting productivity and high returns for the sake of the forest in which they work are unable to charge higher prices for their wood products, while the destructive industry giants bear the FSC seal of approval.

Nevertheless, there is some hope for the future of low-impact forestry in Maine. One bright option for the future are cooperatives such as the Downeast Low-Impact Forestry Cooperative, which helps to educate landowners, foresters and loggers and works to find suitable markets for their products. Another effort, the TREES program, initiated by SmartWood, which is the oldest certification system in the world, is working to ensure equitable access to certification services and certified product markets for small, community, and indigenous forestry operations.

The public must support these types of programs, which reward true sustainable forestry and work to overcome the market forces, which make it so hard to compete with the destructive global forest industry. Consumers must seek out and defend those who actually practice sustainable methods of harvesting our natural resources. If landowners who actually care for the land such as Sam Brown are to survive, and we are to protect the natural forests that are so crucial to our future livelihood, we must support the efforts of sustainable, low-impact forestry.

**Maine Low Impact Forestry Project** is a group of loggers, foresters and woodlot owners interested in developing and promoting the methods and technologies of Low Impact Forestry. The Maine Low Impact Forestry Project is also helping to connect land owners and practitioners of low impact forestry with emerging markets for sustainably harvested forest products.



**Horselogging** is a low impact alternative to conventional machinery for hauling wood out of the forest. In sensitive areas the use of horses can help avoid residual damage to other trees and leave the soil less compacted. Horselogging is practiced by many small landowners in Maine.



## Shrubs:

### Arrowwood *Viburnum dentatum*

**What it Looks Like:** A medium-sized shrub with opposite leaves (like all viburnums), which are oval; pointed at the tip, and have sharply toothed edges. Usually many long stems grow from the same spot. The leaves of some Arrowwood species have a slightly downy (hairy) underside.

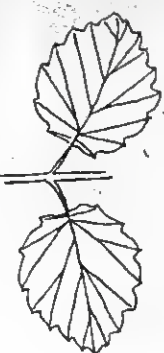
**Flower/Fruit:** Small white blossoms are arranged in umbrella-shaped clusters; dark blue-black berries in August.

**Size:** 3 - 9 ft. tall.

**Habitat:** Forest understory.

The attractive clusters of berries may last well into winter; they provide food for foxes, deer, grouse, and migrating birds.

Native Americans made arrows out of the straight branches.



### Mapleleaf Viburnum (*Viburnum acerifolium*)

**What it Looks Like:** A low shrub often mistaken for a maple sapling because of its opposite, maple-like leaves. However, Mapleleaf Viburnum leaves are soft and downy underneath, and have only three lobes. A flat-topped cluster of berries is held on a short stem above the leaves.

**Flower/Fruit:** Flat clusters of creamy-white flowers; red berries.

**Size:** 4 - 5 ft. tall.

**Habitat:** Forest understory. The red berries turn purple (as does the fall foliage) and are eaten by birds such as grouse. Rabbits and deer like to eat the twigs.



### Shadbush (Downy Serviceberry) (*Amelanchier arborea*)

**What it Looks Like:** A tall shrub resembling a small tree, with clouds of white blossoms in early spring. The flowers are often blooming before the finely serrated, alternate leaves have come out.

**Flower/Fruit:** Blossoms have 5 thin white petals and are found at branch tips; berries are purplish and similar to blueberries, and are ready to eat by midsummer.

**Size:** Many species reach tree height, 30 - 40 ft.; leaves 2 - 4 in. long.

**Habitat:** Forest understory, particularly along the edges of woods or streams.





## Cinnamon Fern (*Osmunda cinnamomea*)

**What It Looks Like:** Cinnamon Ferns are tall and have cinnamon-colored hairs at the base of the leaflets. Their fertile bodies are on separate stalks that arise in the center of the leaf clump. The spores of these fertile bodies are green in the spring and turn cinnamon in the summer, thus making them look like giant cinnamon-sticks.

**Size:** 2 - 4 ft. tall.

**Spores:** April - June.

**Habitat:** Swamps, edges of bogs, wooded stream banks, wet woods with acidic soil.

Although a few caterpillars occasionally roll the young fronds into cocoons and one or two species of birds use the fuzz of the Cinnamon Fern to line their nests, there is practically no interaction of any kind between ferns and animals.



## Sensitive Fern (Bead Fern) (*Onoclea sensibilis*)

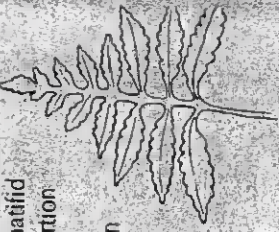
**What It Looks Like:** The only fern in the area with pinnatifid fronds; they are finely veined, divided on the lower portion and lobed toward the tip, with smooth edges. The fertile bodies arise on a separate stalk, shorter than the sterile fronds, in autumn. The blackish-brown, bead-like capsules at the top conceal the sori. These fertile fronds are conspicuous in winter and often persist for 2 or 3 years.

**Size:** 15 - 30 in. tall.

**Spores:** In autumn.

**Habitat:** Marshes, swamps, muddy banks.

One of the oldest ferns on Earth, Sensitive Ferns are so-named because they are the fern most sensitive to cold weather, withering with the first frost. They are also the fern most vulnerable to pollution.



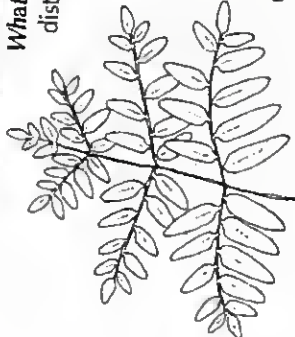
## Royal Fern (*Osmunda regalia*)

**What to Look For:** The look of the Royal Fern is distinctive. The bi-pinnate leaves grow in large clumps from a conspicuous root ball in wet places. The sori are in dense, reddish clusters at the top of the fronds.

**Size:** 2 - 4 ft. tall.

**Spores:** April - June.

**Habitat:** Bogs, swamps, shallow pools, ecosystems with highly acidic soil.



## Conservation Efforts

There are many conservation groups in Maine who are working to protect Maine's forests from complete destruction and development. Converting corporate, industrial lands to protected wild forests is crucial if the great North Woods are to regenerate and continue to support healthy ecosystems. However, many of the current conservation efforts are ineffective, or damaging to local Maine communities.

### Conservation Easements

A conservation easement is a legal agreement by which a landowner voluntarily restricts the use of his or her property for the purposes of conserving specific values. Land ownership entitles the holder to a number of rights such as the right to develop, restrict access, or harvest timber. An easement effectively sells one or more of these rights to a buyer, usually the right to develop.

Recently, easements have been used ineffectively in areas with virtually no threats of development. It is questionable just how real development threats are where there are no public roads, no utility access and nearby towns with schools and stores, such as the area included in the massive West Branch easement, purchased by the state of Maine in 2000 from the Pingree Associates. In recent years over a million remote acres have been "preserved" in such a fashion.

If development is unlikely to take place on these lands, then the easements are essentially just maintaining the status quo. In other words, corporations who sell conservation easements on their land are still practicing the same destructive timber harvesting and are now considered green.

For development conservation easements to be effective, they must be used on land that has more immediate threats for development. What is really needed are some easements that actually restrict industrial logging as well as development?

### RESTORE: The North Woods

RESTORE is an environmental group based out of Boston, which works to recover endangered wildlife and wild forests. RESTORE's major focus in recent years has

been their proposal for a 3.2 million acre Maine Woods National Park.

Many of RESTORE's goals in creating a new national park are worth considering, including allowing devastated lands to recover, restoring habitat for imperiled species, and safeguarding rare ecosystems. Furthermore, RESTORE claims that a Maine Woods National Park would create 5,000 to 20,000 new jobs.

However, in many ways RESTORE's work ignores the local culture of many Mainers, and the desires of residents who would be affected by the park. The proposal is intensely opposed by locals who do not want to lose access to land for hunting, snowmobiling and fishing. Moreover, locals don't want this land to be in the hands of the overbearing federal government.

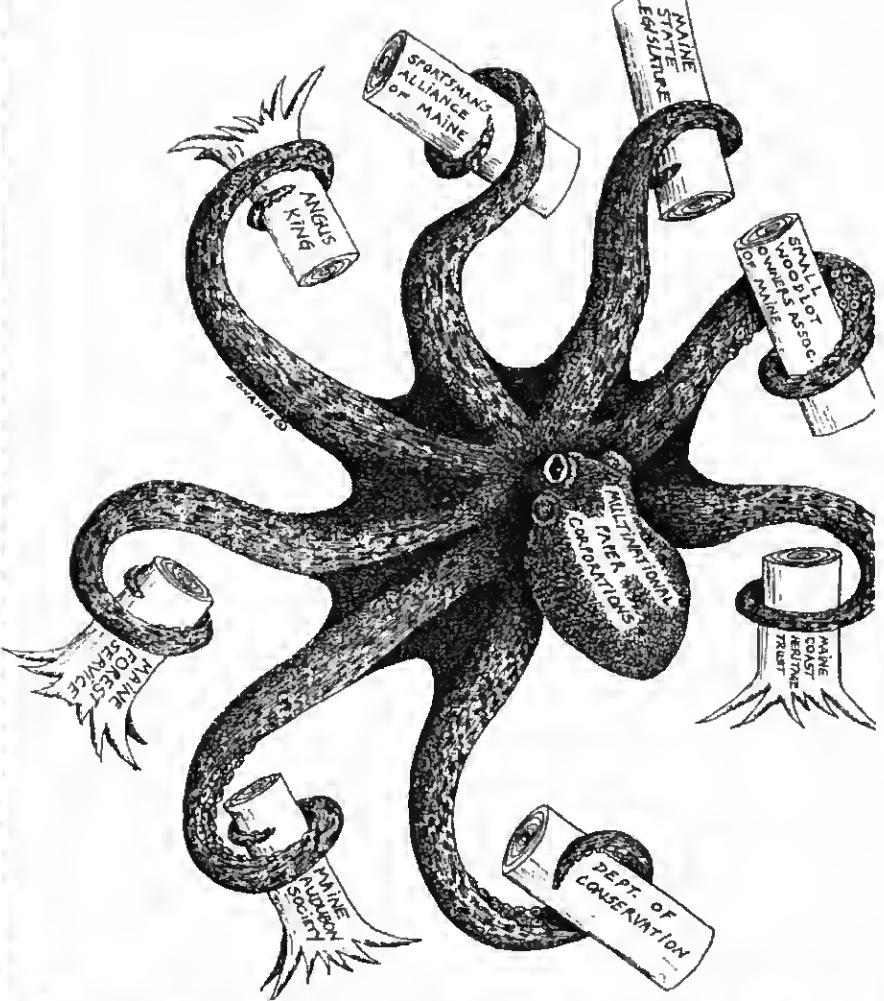
The National Park would bring tons out of state tourists to the area, but it would eliminate the private economy and small independent businesses such as hunting camps. While many park jobs would be created, the proposal would also eliminate the remaining logging industry in the area. You can't simply tell a logger that they are now going to be a park ranger and expect them to accept it.

### Roxanne Quimby

Quimby is a millionaire conservationist who has been using profits from her company Burt's Bees in order to buy up land in the Maine Woods to donate to RESTORE's national park campaign. Quimby is quickly gaining a reputation as an eco-feudalist among some locals who fear that her massive land acquisitions will affect their way of life.

Though Quimby has roots in the state, she moved her company to North Carolina when it was no longer profitable in Maine. Now she is back, and just added 24,083 acres near Baxter State Park to her growing landbase. While Quimby's heart may be in the right place, trying to conserve Maine's forests, she should consider the effects of her multimillion dollar deals on the people who actually live in Maine's North Woods and depend upon the forests for their livelihood.





## Ecological Reserves in Maine

The establishment of Ecological Reserves seems to be a conservation program that in theory could actually work to protect Maine's native species, biodiversity and unique ecosystems. Ecological reserves are intended to preserve representative examples of Maine's 100 distinct ecosystem types. These areas are open to the public but do not allow timber harvesting, mining, or new roads and motorized recreation.

As opposed to other conservation lands such as the Nature Conservancy's preserves, which are often aimed at protecting specific rare and endangered species, Ecological reserves have a holistic view and seek to protect entire ecosystems.

The notion of ecological reserves received much attention due to efforts of the Maine Forest Biodiversity Project, which developed an inventory of potential reserve areas. So far the Maine Bureau of Parks and Lands has designated 14 ecological reserves for a total of 68,974 acres.

Yet, the system is not complete until all of Maine's ecosystems are preserved. The state legislature must authorize more lands to the ecological reserve system and must allocate funds for converting private, industrial forests into protected ecological reserves.

lost ferns in our area grow from underground root systems called rhizomes. very spring, the rhizomes send up new leaves, which are rolled up like a title "fiddlehead." The fiddleheads (some of which are good to eat) then nroll and become the fern frond. The leaves photosynthesize all summer, then die off in the fall, leaving just the rhizome to over-winter.

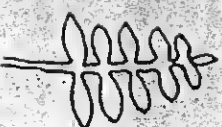
Ferns have a more primitive form of reproduction than do flowering or coniferous plants - they produce spores, which function like seeds but are genetically identical to the parent. The spores are concentrated in little capsules called sori. The location of the sori, which are generally brown in color, depends on the species of fern; they are most often found on the underside of leaflets or on separate stalks. Ferns have two stages to their life cycle: when the sori release the spores into the air, they settle on the ground. Sex organs then develop from the spores; female parts produce the egg, and male parts produce sperm that swim to fertilize the egg. It is during this stage that ferns engage in sexual reproduction and can mix genes.

Identifying characteristics of ferns:

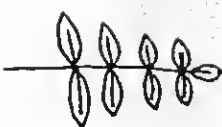
**Pinnatifid:** Simple leaves, which have many deep lobes that do not form individual leaflets.

**Pinnate:** A compound leaf that is divided into smaller leaflets.

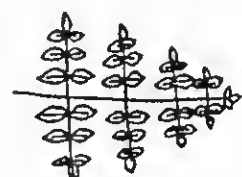
**Bi-pinnate:** A compound leaf divided twice, first into leaflets and then into subleaflets.



Pinnatifid



Pinnate



Bi-pinnate

## Bracken Fern (*Pteridium aquilinum*)

**What it Looks Like:** The fiddlehead, looking like an eagle's claw covered with silver hair, sends up one main stalk, which branches into three fronds with bi-pinnate and strongly triangular leaves.

**Size:** 1 - 3 ft. high.

**Spores:** July - August.

**Habitat:** Open or thinly wooded ground, in barren sandy soil.

Each Bracken Fern stalk is not a separate plant, but a shoot coming up from the widely creeping and branching rootstock; one plant can cover as much as three acres of ground. This habit makes the Bracken Fern highly invasive; it is usually found in large colonies.





## Princess Pine (Ground Pine) (*Lycopodium obscurum*)

**What It Looks Like:** At first glance looks like a miniature pine tree, with branches up to 10" high, but it is actually a type of Clubmoss. Upon close inspection you will see that the tiny scale-like leaves grow off every part of this plant, including the stem.

**Flower/Fruit:** The Clubmosses have spore-bearing cones or "clubs" sticking up from the top.

**Size:** Up to 10 in. tall.

**Habitat:** Wooded ecosystems.

In the times of dinosaurs, *Lycopodiums* (Clubmosses) used to be very common and very big—some were the size of large trees! Much of the petroleum we get out of the earth today was created from the decomposition of these ancient Clubmoss forests.

## Sphagnum Moss (*Sphagnum spp.*)

**What It Looks Like:** A dense, spongy, light green mat made up of rosettes of many moss-like branches. The moss can be picked up in large sheets from swamps and bogs and the tops of wet rocks.

**Size:** 1-2 in. high.

**Habitat:** Wet acidic areas, bogs, vernal pools, moist forests.

Sphagnum moss thrives in the acidic soil of swamps and bogs. In bogs, the remains of sphagnum moss and other plant debris become compacted over the years, until it is many feet deep, creating what is called peat.

Sphagnum peat has many uses, including fuel for fires, fertilizer, and even as building material—the Irish cut out blocks of peat and put them together to make houses.

Sphagnum moss has been used medicinally as an antiseptic and dressing for wounds, and it is reported that Native Americans used sheets of it as diapers for their babies.

## POISON IVY (*Rhus radicans*)

**What It Looks Like:** "Leaves of three, let it be." The leaves of Poison Ivy have three triangular leaflets. These leaflets are sometimes, but not always, shiny, and turn bright red in the autumn.

**Flower/Fruit:** Flowers are tiny and white, bloom late spring; white berries, produced by late summer, are eaten by birds and the seeds are spread in their droppings.

**Size:** Can be a small shrubby plant or can grow as a vine up tree trunks.

**Habitat:** In sunny areas such as roadsides or in forest clearings. All parts of Poison Ivy, including leaves, twigs, roots, and berries, contain oils which can cause serious itching and blistering. DO NOT TOUCH ANY PART OF A PLANT.

## Forest Policy Reform

**Note:** Maine allows Clearcuts of 250 acres, as long as they are buffered by trees. Harvesting has increased from 3.5 million cords in 1960, to 4.8 million cords in 1980 to 6.3 million cords in 2001.

In the past decade there have been a number of legislative campaigns focused on reforming forest practices. Until recently these efforts have been thwarted by the powerful forest industry, which was able to influence the results of referendum voting, through its financial might.

### Ban Clearcutting

In 1995 citizens of Maine, organized by the Maine Green Party collected enough petitions to get a referendum on the ballot asking voters "Do you want Maine to ban clearcutting and set other new logging standards?"

Opposition to this citizens' initiative on behalf of the forest industry created a competing measure called "The Maine Forest Compact", which was also touted as an initiative to improve the practices of industrial forestry. However, the Forest Compact was completely biased, as it was designed in part by 15 major landowners who owned approximately 9.6 million acres of land, representing 59% of Maine's forests. Rather than banning clearcuts, the Forest Compact proposed to limit them to 1% of the land per year. This amount may have sounded minute, but it actually added up to nearly 10,000 acres of clearcuts each year.

The ban clearcutting initiative was defeated due to the immense amount of money raised by the forest industry for adds claiming that the Forest Compact was the more sustainable choice for voters.

Sadly, not even the industrialized version of forest reform was passed. It seems as if voters were confused by the two referendums and therefore voted for neither one. Either way, the corporations got to continue with their destructive practices.

### Question 2

In 2000 another forestry referendum was on the table asking voters: "Do you favor requiring landowners to obtain a permit for all clear-cuts..." Question 2 also proposed to limit landowners' harvests to no greater than their average amount of

Question 2 was much less restrictive than the ban clearcutting referendum, but nevertheless was voted down.

Again, Maine voters rejected the ballot initiative due to the rigorous advertising campaign on behalf of the forest industry, which spent nearly \$3 million on their "No on 2" campaign. In comparison, Forests for the Future, led by Jon Carter, the director of the Forest Ecology Network raised only \$88,806 in attempt to get question 2 passed.

The Industry's "No on 2" campaign deviously convinced small landowners that their referendum would force them to sell off their lands for development, thus increasing suburban sprawl. While the referendum was based primarily on restricting clearcutting, which occurs mostly on large industrial landholdings, the ads portrayed the new regulation as a threat to small woodlots. Through an ad campaign that said "Stop Sprawl, Save Small Woodlands", the industry successfully manipulated the fears of smaller landowners in order to promote their own agenda.

If the referendum were truly focused on small woodlots and suburban sprawl, then the transnational paper companies wouldn't care whether it passed or not.

### Liquidation Harvesting

In the spring of 2004 the legislature finally enacted a reform to Maine's Forest practices by passing rules to prevent cut and run liquidation harvesting.

Liquidation harvesting is "the purchase of timberland followed by a harvest that removes most or all commercial value in standing timber, without regard for long-term forest management principles, and the subsequent sale or attempted resale of the harvested land within 5 years."

The new rules limit harvesting to 50% of merchantable size timber, for lands that are bought, cut and sold within a period of 5 years. Additionally, the rules require the use of an accredited forester and the creation of a harvest plan.

While the new liquidation harvesting rules are a step in the right direction, there are many exceptions and loopholes. For example, lands that are third party certified, or lands that were given as gifts are exempt from the rules. It seems as though many industrial landowners will be able to conduct business as usual under these loose guidelines.



## RESISTANCE

ened. In order to save our woodlands and the life which they support, a strong network of forest defenders and campaigns is necessary. Industry in the Maine Woods must be monitored, and corporations must be held accountable for their actions. Groups of Mainers have been fighting the oppressive forest industry for years. We must build upon their success and continue to fight for the future of the Maine Woods.

## No Compromises!

### MT. BLUE STATE PARK:

Throughout the early 90's Maine Earth First! engaged in a prolonged struggle to prevent the logging of state Forestlands in Mt. Blue State park in Weld, Maine. Activists worked to halt the logging of public land after a small logging firm traded private land for access to forests in the state park.

### BORDER BLOCKADE

In October 1999, 11 loggers from the Allagash and Fort Kent areas of Northern Maine blocked a border crossing with the help of activists from the Native Forest Network and Earth First!. The loggers were protesting the loss of jobs to Canadian workers and the blockade prevented Quebec loggers and logging trucks from entering Maine.

### GENETICALLY ENGINEERED TREES:

In July of 2000, activists destroyed 1,500-2,000 genetically engineered trees at MEAD corporation facilities in Milford, Maine. A spokesman likened the action to a corporate clearcut and denounced the creation of monoculture tree plantations and the creation of "super trees".

### ROUTE ONE WIDENING:

In 2002 activists fought to save the "Elephant Tree", a 100 year old Chestnut tree, which was threatened due to highway widening plans on Route one in Warren, Maine. Activists occupied the canopy of the Elephant Tree and fought to slow down the widening. Eight people were charged with criminal trespass on the tree was eventually cut down.



### Fringed Polygala (Gay Wings) (*Polygala paucifolia*)

What it looks like: A tiny plant with both leaves and distinct flower found at the top of the short stem. Leaves and petals are both only about an inch long.

flower/fruit: Bright pink, orchid-like flower with two wing-shaped "petals" coming off the sides of a fringed hollow tube; blooms late spring - early summer.

size: 3-7 inches tall.

habitat: Nutrient-rich, moist woods.

The Fringed Polygala blooms at the same time as the Pink Lady's Slipper and they make a spectacular combination on the forest floor. It was once thought that if nursing mothers or cows ate the Fringed Polygala, their milk production would increase.



Yum

Yum

Solomon's Seal (*Polygonatum pubescens*)

What it looks like: A tall plant that consists of a single arching stem with delicate, light green, alternate leaves along the outer half of the stem, and small flowers hanging underneath the stem; grows in large colonies.

Flower/Fruit: Light greenish-white, bell-like flowers hang in pairs from where leaves join stem; blooms late spring - early summer; blue-black berries.

Size: 2 - 5 ft. tall.

Habitat: Shady areas of woods, brushy areas, riverbanks.

The root of Solomon's Seal is edible in early spring (just after the leaves emerge); the young stems are edible also. The plant sends up only one stem each year; you can tell how old the plant is by counting the little round scars or "seals" left on the root where each year's stem has died. There is one "seal" for each year the plant is old.



### Indian Pipe (*Monotropa uniflora*)

What it looks like: Different from almost every other plant in the forest; Indian Pipe sends up a colorless, pencil-sized stalk with scale-leaves along its sides, topped by a nodding flower.

Flower/Fruit: One bell-shaped, waxy-white, odorless flower blooms June - September, but turns black as the fruit ripens.

Size: 2 - 12 in. high; flower 3/4" long.

Habitat: Rich, shady woods.

Indian Pipes are unusual because they contain no chlorophyll - that is, why no part of the plant is green. It does not manufacture its own food by photosynthesis, but gets its nourishment from decayed organic matter in the soil.

Not a plant or  
a plant the  
limitations  
categories



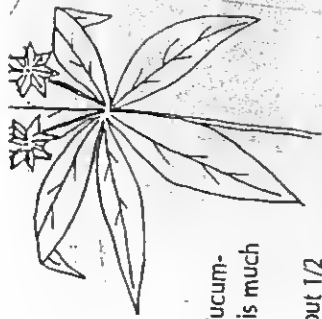
## Starflower (*Trientalis borealis*)

**What It Looks Like:** Starflower has a whorl of 5 to 10 narrow, pointed green leaves at the top of a thin stem; two tiny star-like flowers arise from the center of the whorl. Sometimes Starflower is confused with Indian Cucumber-Root (see below); however, Starflower is much shorter.

**Flower/Fruit:** Delicate, white star-like flowers, about 1/2 inch wide, bloom mid-spring through summer.  
**Size:** 6-8 in. high.

**Habitat:** Cool forests.

Starflowers, one of the most common wildflowers in northern forests, store nutrients in fleshy underground tubers; one western species is called "Indian Potato."



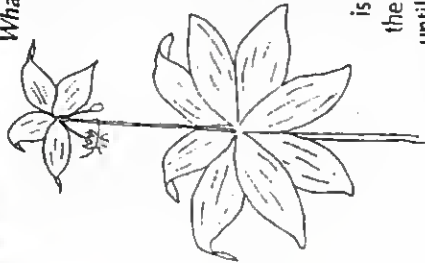
## Indian Cucumber-Root (*Medeola virginiana*)

**What It Looks Like:** Usually has two whorls of pointed leaves separated by a length of bare stem; however, young plants have only one whorl of leaves; greenish-yellow flowers dangle from the top.

**Flower/Fruit:** Flowers are like a tiny lily, about 1/2 in. long; bloom late spring; berries dark purplish blue color.  
**Size:** 1-3 ft. tall.

**Habitat:** Damp forests.

The cucumber-like "root" (an underground stem) is edible and tastes like a sweet cucumber. To find the root, feel down along the stem with your finger until you feel a large (up to 2 inches long) tuber, then dig it up, clean it off and try it!



Locally this plant is affectionately referred to as: *Jacob's Belly*



## Bluets (Quaker Ladies) (*Houstonia caerulea*)

**What It Looks Like:** Tiny plants with delicate, pale blue flowers that often cover large patches of woodland, meadow, or lawns, growing right in with grass, violets, and other field wildflowers; pointed leaves are arranged in pairs along slender stems.

**Flower/Fruit:** Flowers appear at stem ends and have four petals varying from white to blue to lavender, with a bright yellow center; blooms in early spring.

**Size:** 2-8 in. tall; flower 1/4-1/2 in. wide.

**Habitat:** Moist meadows, open woods, fields. The pale-blue Bluets often grow in such large masses that, from a distance, they look like snow on the field.



# Wildlife In Maine's Forests

Maine's Forests provide habitat for a wide array of fauna. Bird species range from the Black capped Chickadees, Redbreasted Nuthatches, and Woodcocks, to Bald Eagles, Loons and Peregrine Falcons. Maine is also well known for its diverse group of large mammals including the Moose, Black Bear, White-tailed Deer, Wolf, Red Fox, Bobcat, Canada Lynx and Coyote. Many of Maine's native wildlife species are under threat due to habitat destruction, suburban sprawl, and cruel hunting methods. Just as indigenous populations were killed and forced out of Maine by dominant colonizers, Maine's native non-human populations are now finding their homes consumed by rapidly expanding capitalist development.

## Black Bear:

Maine is home to an estimated 23,000 Black Bears, the largest population of any state in the Eastern U.S. Black Bears usually feed on tree buds and new leaves, nuts, berries and apples. As opportunists, Black Bears will also often eat carrion or prey, be it insects, fish, amphibians or smaller mammals. Black Bears are highly adaptable and have learned to live near sprawling human populations. When their natural food supply dwindles, many Black Bears will head to town feeding on garbage, birdfood, beehives and cultivated crops. For this reason, many Maine residents have become wary of their Black Bear neighbors.

Maine is the only state which still allows Bear trapping using foothold leg traps and live-cage traps. Currently there is a large debate in Maine over the tactic of Bear baiting. Bear baiting is the practice of luring a bear to a feeding station with stale pastries, molasses, honey or meat so that a concealed hunter can shoot the feeding bear. 3,500 to 4,000 Black Bears are killed each year in Maine and roughly 3/4 these are hunted with bait.

While some people eat Bear meat, this sport is mostly a trophy hunt. Maine Citizens for Fair Bear Hunting is organizing a referendum on the ballot to ban the practice of Bear Baiting. Opponents argue that this will greatly increase Bear populations, and "nuisance bears" which bother residents in suburban areas.

Hunting can be a natural and instinctive act. Yet, tempting wildlife with processed human foods, and targeting them from a hidden location is far from nature. Maine's forests were a home for Bears long before the eruption of suburbia. Perhaps the problem is not the large community of Bears, but the out of control human population and the inexorable sprawl of development.

## Eastern Wolf:

For thousands of years, the eastern timber wolf lived throughout the forests of the Northeast. But in the 1600s, colonists began to clear the land for agriculture. In the process wolves were cleared out too. Whole packs were shot, trapped, poisoned, and burned, until the last wolf was driven from the region by the turn of the century.

But, as the economy of New England has changed, so has the land. In the last hundred years, the forests have been regenerating in old pastures. Studies have shown that in the vast North Woods of Maine there is enough prey, few enough humans and roads to support 1,000-2,000 wolves.

Groups such as the Maine Wolf Coalition and The Coalition to Restore the Eastern Wolf have advocated for the recovery of Wolf populations in Maine. In response to this surge of public interest, the U.S. Fish and Wildlife Service has promised to begin developing a wolf recovery plan for the Northeast. However, this plan means nothing if the public does not continue to support Wolf Recovery.

Myths of the "big bad wolf" still exist. Playing on peoples' fears, opponents in Maine have passed anti-wolf laws. Some people fear that wolves will attack their children, prey upon livestock, and decimate deer herds. Others fear that laws protecting wolves



will "lock up the forest" and mean lost logging jobs.

The truth is that there is not one good reason to fear the wolf. Experiences with wolf recovery in other parts of the country show that wolves do not pose any significant threat to people's livelihoods, pastimes, or safety. Wolf recovery can actually increase the health of prey populations, such as deer. A successful wolf recovery program will educate people to feel safe with wolves re-inhabiting the forest.

### Canada Lynx

The Canada lynx, a brownish-gray cat usually weighing less than thirty pounds and distinguished by its long black ear tufts, once ranged throughout much of the Northeast and Northwest forests. Today its numbers have dwindled to only several hundred scattered individuals, with the last remaining populations in Maine, Montana, Idaho, and Washington. For almost a decade, citizens from around the country have been using legal means to pressure the US Fish and Wildlife Service to protect the lynx under the Endangered Species Act in 16 states.

Finally, this hard work paid off. In March 2000, the Canada lynx was protected under the Endangered Species Act. However, on-the-ground efforts to recover this species are proceeding at a very slow pace. Although the lynx is now listed as "threatened," the US Fish and Wildlife Service has dismissed the Northeast as a low priority area, and they failed to address multiple threats to the species or designate critical habitat. Conservation groups are continuing to use legal pressure to ensure that the Canada lynx gets the full protection that it deserves.

With suitable habitat and abundant prey, Maine represents the best opportunity in the northeast for the survival and eventual recovery of the lynx. Through a federal grant, the state has received funding to do research, which is essential to determine necessary action to achieve species recovery. However, more active recovery steps must be implemented immediately to ensure that the lynx and its wild habitat is restored.

### Atlantic Salmon Restoration

Atlantic salmon were once so abundant throughout New England's watersheds that hundreds of thousands of these wild fish migrated in and out of our rivers each year. Over the last two centuries, dams, overfishing, excessive logging, shoreline development, pollution, and industrial water withdrawals have degraded rivers, streams, and oceans critical to the salmon's survival. As a result, fewer than 2,000 salmon return annually to their spawning grounds in New England. This represents barely 1 percent of the historic population. Today, the only remaining wild Atlantic salmon runs in our country are in a handful of Maine rivers and streams.

In 1993, Maine citizens took action to save from extinction the last remaining wild Atlantic salmon in the U.S. Petitions were sent urging the federal government to use the Endangered Species Act to protect the Atlantic salmon as endangered throughout its historic range in the United States. For years, the fisheries agencies dragged their feet while the number of fish continued to dwindle.

In recent years, several other state and national conservation groups have joined the effort, including Atlantic Salmon Federation, Conservation Action Project, Defenders of Wildlife, and Trout Unlimited. Thanks to this work the federal agencies have listed the Atlantic salmon as "endangered" under the ESA.

Many other species in Maine such as cougars and coyotes are threatened by anthropogenic human activities. Maine has an endangered species act which mandates that all species of fish and wildlife and the ecosystems on which they depend must be conserved. We must be educated about our native wildlife. Action must be taken to ensure that the destructive logging industry and development does not threaten Maine's native non-human populations.

### Wild Sarsaparilla (*Aralia nudicaulis*)

**Yum!**

**What it looks like:** Wild Sarsaparilla has a single stalk that grows up to a foot off the ground and then splits into three groups of five toothed leaflets. A member of the Ginseng family, it is very similar to Wild Ginseng, only larger. The young plant is often mistaken for Poison Ivy.

**Flower/Fruit:** Three "puffballs" of greenish-white flowers found atop a single stalk, which is shorter than the leaf stalks; blooms in early summer; dark purple berries follow.

**Size:** 8-16 in. high.

**Habitat:** Forests.

Very common in most Maine forests. Wild Sarsaparilla will even grow under hemlocks. A cousin of this sarsaparilla was used to make a tasty root beer-like soda in the old days. Native Americans would eat the roots to sustain them on long hunts or in times of war.

### Bunchberry (*Cornus canadensis*)

**What it looks like:** Bunchberry, a ground-hugging member of the Dogwood (*Cornus*) family, is a short plant with one whorl of large, pointed green leaves arranged in a circle around the stem. In the center of this whorl a tiny stem supports a large white "flower," to be followed by a cluster of brilliant red berries in the fall.

**Flower/Fruit:** The "flower," blooming late spring to midsummer, is actually a tiny cluster of greenish-white blossoms in the center of four white bracts, or modified leaves. The red berries are tightly bunched, giving the plant its name.

**Size:** 3-8 in. high.

**Habitat:** Cool, damp woods.

Try the "dogwood test" on Bunchberries: carefully tear the leaf in half and you can see little cottony threads in the veins. All dogwoods have these threads.

### Lowbush Blueberry (*Vaccinium angustifolium*)

**What it looks like:** The Lowbush Blueberry is a genuine

groundcover plant - meaning that it is less than

8 in. tall. It has shiny, bright green, lance-shaped leaves, green stems, and grows in large colonies.

**Flower/Fruit:** Flowers are white or pink-tinged and bell-like; bloom in spring; very small blue-black berries ripen in August.

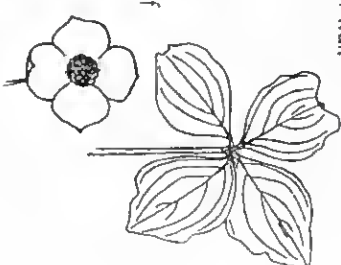
**Size:** Usually less than 8 in. tall.

**Habitat:** Moist forests and bogs; dry sandy flats; rocky slopes; acid soils.

Lowbush Blueberries produce many berries in the late summer. They are an important cash crop; when you buy wild Maine blueberries, they are Lowbush Blueberries. The flowers, like those of their highbush cousins, are also edible, and taste a little like blueberries.



**Assumptions?**





once, after staring in a field we woke up with strange red stains on our pants... staring in a strawberry patch



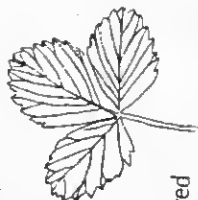
**Cypripedium acaule** Pink Lady's Slipper  
**What It Looks Like:** Two large (6 - 8 in.), oval-shaped and ribbed leaves are paired at the base of the flower stalk; at the top blooms one bright pink, orchid-like flower.

**Flower/Fruit:** The petal puffs out so that it looks like the toe of a slipper or moccasin; blooms spring - early summer.  
**Size:** 6-15 in. tall; flower 2 - 3 in. wide.  
**Habitat:** Forests with acidic soil, pine barrens, bogs. The gorgeous Lady's Slipper, a member of the Orchid family, once grew in great colonies in Maine. There used to be no restriction on picking it and the flowers were actually over-picked. Though not considered endangered, it is now a protected flower and may no longer be picked.

### Wild Strawberry (*Fragaria virginiana*)

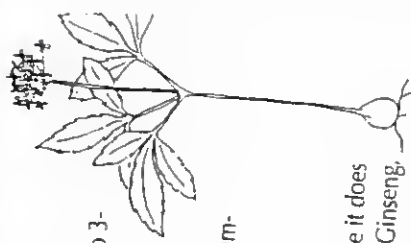


**What It Looks Like:** A low plant with 3 coarsely toothed leaves on a slender stalk (leaves look the same as those of the cultivated strawberry); spreads by runners, which root and produce a new plant. Round-petaled white flowers are on a separate stalk.  
**Flower/Fruit:** Blooms late spring - through midsummer; five-petaled white flowers have yellow centers; fruits are clustered among the leaves. They look like cultivated strawberries but are much smaller and taste sweeter.



**Size:** 2 - 10 in. tall; flower 1/2 - 3/4 in. wide.  
**Habitat:** Widespread in fields and open places. The familiar "strawberry" is not a berry; it is the pulpy center of the flower. The actual seeds are embedded in pits in the red fruit.

### Dwarf Ginseng (*Panax trifolius*)



**What It Looks Like:** Three stalked leaves, each divided into 3-5 leaflets, extending from an upright stalk; leaves toothed.  
**Flower/Fruit:** Flowers white, in small, bell-shaped cluster extending from base of leaves; blooms late spring - early summer; fruit is a yellow berry.  
**Size:** 4 - 8 in. tall.  
**Habitat:** Moist, nutrient-rich forest. Dwarf Ginseng has a round, white tuberous root which, while it does not have the magical properties ascribed to the root of Asian Ginseng, can be eaten raw or boiled.

# RENAMING OUR FORESTS

For too long, the forest has been divided up into its component parts, seen as products and commodities, and classified by field guides into fragments and isolated pieces. Its easy to find field guides for trees, or wildflowers, or mushrooms, or ferns or mammals, or birds, but nowhere do we see the "authoritative labeling industry" consider forests as an entire ecosystem and create a guide to understanding the community as an interdependent functioning whole. The whole idea of field guides seems to be an authoritative exercise in spreading dominant culture. Latin names for organisms have been successfully perpetuating the common people's separation from nature for hundreds of years.

Its time we take back our ability to have common names, common language for the other organisms we share this planet with. We need names for things so that we can communicate about their roles as food, medicine, material and spiritual significance. But we also need to get to know organisms on an intimate basis, the way we know our lovers, what time they wake up in the morning, when they flower, what they are sensitive to, what they like, who they live with, and what hurts them.

In an effort to get more familiar with our bioregion, we have plagiarized this field guide which is divided up into biological communities. Although this particular guide has taken the step to examine ecological communities as a whole, it is still full of white supremacy, capitalism and dominant christian culture. If you don't know something's name, or don't like the name it has, make one up.

Language is a tool that we can use to honor and respect the forest. When we rename things according to our relationship to them, instead of relying on the names and relationships that are handed to us by dominant destructive culture, we cease to be separate from the forest as a conqueror, and reclaim our status as one amongst many organisms that live in the forest.

## Groundcover Plants

### Wintergreen (Checkerberry) (*Gaultheria procumbens*)

**What It Looks Like:** A low plant with erect stems 2 - 6 in. high, and 2-6 thick, oval-shaped, shiny leaves per stem. Look for the red "stem" at the base of each leaf. Wintergreen spreads underground to form large colonies.

**Flower/Fruit:** Small, bell-shaped white flower hangs down from the stalk in late summer and matures into an edible red berry with a star pattern on the bottom. The berry has the familiar wintergreen flavor.



Yum!



Size: 2-6 in. high.

**Habitat:** Sandy woods, clearings, roadsides.

You can chew the leaves of Wintergreen and eat the flavorful berries. The berries are similar to those of Partridgeberry (see below), but the two plants are very different.

*\* a great way to freshen your breath*

### Partridgeberry (Running Box) (*Mitchella repens*)

**What it looks like:** Matted stems that creep along the ground, with small, opposite, nearly round leaves that have prominent white veins.

**Flower/Fruit:** Pair of pink or white trumpet-like flowers at end of runner, blooms in summer, the red berries also appear in pairs and have two little "eyes" on the bottom instead of the star pattern found on the Wintergreen berry.

Size: 4 - 12 in. long, trailing stems.

**Habitat:** Forests.

Partridgeberry is rarely found in large colonies, as Wintergreen is. The berries are edible, but pretty much flavorless.

### Trailing Arbutus (Mayflower) (*Epigaea repens*)

**What it looks like:** A creeping evergreen plant with a woody stem and glossy, oval-shaped leaves with rounded ends. Exquisite flowers cluster together at the end of the trailing stems. Gently push aside last year's leaves to find the flowers.



**Flower/Fruit:** Light pink flowers look like a tiny trumpet or bugle; each one has 5 petals. The extremely fragrant flowers appear before the last snow is gone and before the new leaves appear in June.

Size: Stem to 5 ft. long; flowers 1/4-1/2 in. wide.

**Habitat:** Sandy woods, clearings.

The Trailing Arbutus is a favorite spring wildflower because it is one of the first to bloom, and it has a beautiful color and a strong fragrance. Picking is forbidden by law in many parts of its range, so enjoy it with your eyes only please!

### Goldthread (*Copis trifolia*)

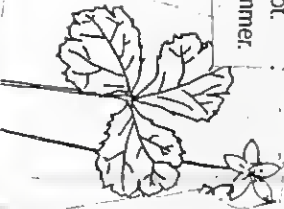
**What it looks like:** A very small plant with three lobed leaflets (similar to clover) and tiny white flowers at the end of long, leafless stalks. It has a thin, underground stem system that is bright yellow/gold and looks like a root.

**Flower/Fruit:** The delicate white flower blooms in late spring to early summer.

Size: 3-6 in. tall.

**Habitat:** Mossy woods, bogs.

The gold "root" (which is actually an underground stem) can be used as a dye and also, despite its bitter flavor, as a medicine. Chewing it is said to cure canker sores. Native Americans would give the root to teething children to dull the pain of emerging teeth.



### Canada Mayflower (*Lythrum latifolium*)

(*Mainthennium canadense*)

**What it looks like:** A plant resembling Lily-of-the-Valley that comes up in huge colonies and carpets the forest floor like grass in the spring. Two (sometimes three) small leaves clasp the upright stem, at the end of which a feathery cluster of star-shaped flowers appears.

white flowers appears.

**Flower/Fruit:** Cluster of small white flowers, four petals; blooms mid-spring, berries turn pale red by fall.

Size: 2 - 6 in. tall; flower 1/4 in. wide.

**Habitat:** Moist woods, thickets, clearings, open areas under trees.

Among the first plants to come up in the spring, Canada Mayflower may appear to be many different plants but they are often all the same individual—they have long roots, or runners, that spread underground and send up many shoots.

### Wood Sorrel (*Oxalis* spp.)

**What it looks like:** A small, very common plant with three-lobed leaves that look like clover; however, Wood Sorrel leaflets are heart-shaped rather than round, and often close at night. There are several varieties, all with small, delicate flowers on thin stalks; the flowers may be yellow or purple or purple-and-white-striped.

**Flower/Fruit:** Some species of Wood Sorrel is almost always in bloom, from early spring to late fall. The Yellow Wood Sorrel has fruits like little candlesticks on bent stalks.

Size: 1 - 8 in. tall; flower 1/2 - 3/4 in. wide.

**Habitat:** Woods, fields, clearings, lawns, waste places, swampy lowlands.

Sorrel leaves have a tart lemon/sour apple flavor and have been popular salad ingredients for centuries; they also have medicinal uses.



### Wild Oats (Little Merrybells) (*Utricularia sessilifolia*)

**What it looks like:** A slim, almost grass-like plant with a single, pale-yellow flower, shaped like a long bell, hanging down from the end of a drooping branch. The long, pointed leaves are attached directly to the stem, with no stalk.

**Flower/Fruit:** The creamy bellflowers have six petal-like parts and bloom in early spring.

Size: 6 - 12 in. tall; flower 1 in. long.

**Habitat:** Woods and thickets.

Wild Oats and other merrybells have asparagus-like shoots that arise from spreading rootstocks. These shoots used to be eaten, and that practice has threatened the

populations of these plants.

*again, we got to believe that there are other threats more significant than harvesting*

*There is a myth I've heard that this plant only blooms once every 100 years*

*Wild Lily of the Valley*

*This plant has a relative in Ireland - it is a Shamrock*